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Reference

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FIELD MANUAL

THE AIR-GROUND OPERATIONS SYSTEM

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THE AIR-GROUND OPERATIONS SYSTEM

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CHAPTER 1

INTRODUCTION

(STANAG 2134)

1-1. Purpose and Scope

a. This manual provides doctrinal guidance to Army commanders and staff officers for requesting and coordinating the use of Air Force tactical air support and Army aviation support. The air-ground operations system (AGOS), comprised of the Army air-ground system (AAGS) and the Air Force tactical air control system (TACS), is described in detail. Procedures for planning and coordinating the execution of air support missions, including individual Service responsibilities and liaison requirements, are included.

b. This manual conforms to existing doctrine, procedures, and relationships for joint operations. It does not alter the roles and missions of the U.S. Air Force, the U.S. Navy, and the U.S. Marine Corps, in providing tactical air support to the U.S. Army. Procedures and techniques from other manual are repeated only when necessary for understanding and continuity.

c. The doctrine contained in this manual applies to all geographic areas and to all types of army tactical operations. The doctrine also applies to the operation of the air-ground operations system in—

(1) General war, to include consideration of the employment of, and protection from, nuclear munitions and biological and chemical agents; and operations in nuclear, biological, and chemical environments.

(2) Limited war.

(3) Cold war, to include stability operations.

d. This manual is in consonance with STANAG 2134, *Offensive Air Support Operations*; STANAG 2099 (Edition No. 2), *Fire Coordination in Support of Land Forces*; STANAG 3277, *Air Reconnaissance Request Form*. SOLOG 118, *Standardization of Policies and Procedures Governing the Regulation/Control and Identification of Army Traffic in the Combat Zone*; and AR/AFR 525-25, *Delineation of Service Responsibilities for Tactical Air Control Parties*.

e. Users of this manual are encouraged to submit recommendations to improve its clarity and accuracy. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. They should provide reasons for each comment to insure understanding and to permit complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to the Commanding General, United States Army Combat Developments Command Institute of Combined Arms and Support, Fort Leavenworth, Kansas 66027. Originators of proposed changes that constitute a significant modification of approved Army doctrine may send an information copy, through command channels, to the Commanding General, United States Army Combat Developments Command, Fort Belvoir, Virginia 22060, to facilitate review and followup.

1-2. Designation of Units

The word "battalion" when used in general terms, e.g., battalion commander, battalion staff, also applies to the cavalry squadron unless otherwise specified. Similarly, any general reference to company pertains to the cavalry troop and the artillery battery; and, unless specified otherwise, any reference to the brigade applies to the armored cavalry regiment. The term "Army component commander" means the senior Army commander in the theater responsible for air support planning.

1-3. Terms and Abbreviations

a. Terms.

(1) Terms presently used in air operations are undergoing changes and standardization. To avoid confusion and misunderstanding, this manual contains a glossary which lists and defines terms as they are used in the text.

(2) U.S. Navy forces use the term "antiair" when referring to offensive and defensive actions taken to gain and maintain control of airspace

while the U.S. Air Force uses the term "counter-air" to describe the same actions. These terms are interchangeable; however, within this manual, the term "counterair" is used for uniformity.

b. *Abbreviations.* As with terms, military language contains a large number of abbreviations

and acronyms that are constantly changing and that, in many cases, are identical in spelling but have different meanings. Therefore, this manual avoids their use. When appropriate, some of the more common abbreviations are shown parenthetically after the spelling of the word or words.

CHAPTER 2

AIR SUPPORT OPERATIONS

(NATO STANAG 2099, NATO STANAG 2134, ABCA SOLOG 118)

Section I. INTRODUCTION

2-1. General

a. Air operations are either strategic or tactical depending on the purpose, objective, and forces involved.

b. Strategic air operations are conducted against the enemy's warmaking capacity. The results of these operations are not readily apparent and normally do not directly assist in the land battle.

c. Tactical air operations include counterair operations, air interdiction operations, and air support operations. These operations are executed in coordination with ground combat forces—

(1) To gain and maintain air superiority in the battle area.

(2) To prevent movement of enemy forces into and within the battle area and to seek out and destroy those forces and their supporting installations.

(3) To join with surface forces in operations within the battle area to assist directly in attaining the immediate tactical objective.

d. Although all tactical air operations assist in the conduct of the land battle, counterair and air interdiction operations are normally conducted in a manner and at such a distance from the battle area that detailed integration with the fire and movement of friendly forces is not required. Air support operations, however, assist in attainment of the immediate tactical objective and are executed in direct coordination with ground combat elements. Detailed integration with fire and movement of friendly forces is required.

2-2. Air Support Operations

Air support operations are conducted by tactical air forces and army aviation units. They are comprised of—

a. *Tactical Air Support.* Tactical air support operations include close air support, tactical air re-

connaissance, and tactical airlift. Tactical air support missions normally are executed by fighter, reconnaissance, and airlift aircraft of the Air Force; however, the Navy, and the Marine Corps may provide tactical air support to the Army under certain conditions as outlined in chapter 3.

(1) *Close air support.* Close air support is air action against hostile targets that are in close proximity to friendly ground forces. Detailed integration of each close support mission with the fire and movement of those forces is required. Close air support strikes normally are controlled by an element of the tactical air control system operating with the supported maneuver unit.

(2) *Tactical air reconnaissance.* Tactical air reconnaissance is the use of aircraft of tactical air forces to obtain information on terrain, weather, and the disposition, composition, movement, installations, lines of communications, and electronic and communication emissions of enemy forces. Tactical air reconnaissance provides direct support to Army tactical operations. It includes systematic and random observation of ground battle areas, targets, and airspace sectors by visual, optical, electronic, or other sensory devices.

(3) *Tactical airlift.* Tactical airlift is the air movement of personnel and cargo by tactical air forces available to the joint force commander. It is part of the air delivery link to the battlefield. Tactical airlift operations include air movement of personnel, supplies, and equipment; aeromedical evacuation; parachute operations; and special warfare support operations.

b. *Army Aviation Support.* Army aviation support operations include direct aerial fire support, Army aerial reconnaissance and surveillance, and airmobile operations. Army aviation support missions are executed by Army aviation units and by aircraft organic to units and organizations within the field army.

(1) *Direct aerial fire support.* Direct aerial fire support missions are executed by Army air-

craft to extend, supplement, or temporarily replace the Army commander's other fire support capabilities. Such fires complement, rather than substitute for ground-based fire or close air support. The principal direct aerial fire support system is the attack helicopter. These helicopters engage in offensive, defensive, and other operations which contribute to the location and destruction of hostile targets to include self-protection, escort, fire suppression, reconnaissance, security, raids, screening, and antitank operations.

(2) *Army aerial reconnaissance and surveillance.* Army aerial reconnaissance and surveillance missions are executed by Army aviation to obtain information about the activities and resources of enemy forces, the weather, or terrain in support of immediate tactical operations. These missions are flown by both helicopters and fixed-

wing aircraft utilizing visual observation; photography, radar, and other means. These aircraft can cover relatively large areas, thus permitting ground reconnaissance elements to concentrate on areas of greatest intelligence productivity.

(3) *Airmobile operations.* Airmobile operations are the movement of combat forces and their equipment about the battlefield in Army aircraft under the control of the ground force commander. Provision of increased and immediately responsive battlefield mobility is the fundamental purpose of all Army airlift aircraft. Airmobility can be employed in most tactical operations in which there is a requirement for the rapid movement of personnel or equipment. Army airlift missions also include aeromedical evacuation and administrative air movement of personnel and cargo. The helicopter is the principal Army airlift aircraft.

Section II. FUNDAMENTALS OF AIR SUPPORT

2-3. Apportionment and Allocation of Air Support Resources

a. *General.* The joint force commander establishes priorities and directs force apportionment. Within this guidance, the component commanders allocate their resources to accomplish specific tasks.

b. *Apportionment.*

(1) Apportionment relates to the application of resources available. The joint force commander decides that proportion of tactical air resources which will be applied to each of the combat functions of counterair, air interdiction, and tactical air support. His decision is based, in part, on the recommendations of the component commanders.

(2) The Army component commander bases his apportionment recommendations on review and analysis of the air support requirements of subordinate commands. Starting at company, each army tactical headquarters develops its air support requirements. These requirements normally are submitted in the form of preplanned requests. Those requirements that can be accomplished by Army aviation or artillery resources available at the command concerned are extracted; the remaining air support requirements are assigned priorities and forwarded to the next higher level in the form of preplanned requests. When this process has been completed by all intermediate Army command levels, the Army component commander can identify those air support require-

ments that Army resources cannot accomplish and can make recommendations to the joint force commander.

(3) The Air Force component commander bases his apportionment recommendations on his mission, the enemy air threat availability of resources, and the requirements of subordinate commands.

(4) On receipt of the component commanders' recommendations, the joint force commander makes his own estimate and apportions the available tactical air effort among the air combat functions. He expresses the apportionment in terms of percentage of the available tactical air effort and notifies the air component commander. Only the joint force commander can change this daily apportionment. This apportionment decision may apply for any period of time; however, it is usually reconfirmed daily.

(5) When notified of the joint force commander's apportionment, the air component commander determines the number of sorties available for tactical air support, interdiction, and counterair missions. He notifies the Army component commander, subordinate tactical air commands, and the elements of the tactical air control system regarding the number of sorties apportioned for tactical air support. The air component commander commits these sorties in response to Army requirements and attempts to obtain additional tactical air support when the Army compo-

nent commander exhausts his apportioned resources.

(6) The joint force commander does not apportion Army aviation resources or units; however, he may assign the Army component commander tasks that will require commitment of Army aviation resources.

c. Allocation.

(1) The Army component commander allocates most of his apportioned tactical air support sorties to subordinate commands. This allocation is expressed as a specified number of sorties. The Army component commander informs the air component commander of the number of sorties allocated to each subordinate Army command. Subordinate field army commanders normally use a portion of the allocated tactical air support sorties to accomplish preplanned requests and suballocate the remainder to lower echelons to meet immediate requirements.

(2) Each subordinate Army commander may, in turn, suballocate the sorties. Sorties normally are not suballocated below corps; however, except to support lower level organizations on independent operations. Army commanders allocating or suballocating sorties so inform the tactical air control system agency at their echelon and also pass this information through command channels to the next higher headquarters.

(3) Allocations or suballocations do not alter request procedures.

(4) Only commanders allocating or suballocating sorties can change the allocation or suballocation. These Army commanders inform the direct air support center (DASC) or the tactical air control center (TACC) of this allocation or suballocation through the attached air liaison officer (ALO) in addition to giving the normal notification through the chain of command.

d. Army Aviation Resources. Concurrently with the action taken to determine tactical air support requirements, the Army component commander determines the distribution and methods of employment for nondivisional Army aviation units. He can retain this capability under his control, attach it to subordinate commands, or place it in support of subordinate commands. Normally, all Army aviation available to the Army component commander except that required for command and control by the Army component headquarters is attached to subordinate commands. Subordinate commands can retain attached resources under

their control, attach the resources to subordinate commands, or place the resources in support of subordinate commands. Normally, Army aviation units are placed in direct or general support of the lowest command echelon capable of controlling and employing them efficiently.

e. Adjustment of Capabilities.

(1) The Army component commander returns tactical air support sortie allocations not required to the air component commander for use in the counterair and air interdiction programs. Sorties allocated for tactical air support can be withdrawn for other purposes only by agreement of the Army commander or by direction of the joint force commander.

(2) Army aviation support that is attached to or supports a command and that is not required for 1 or several days, for the duration of an operation released back to the commander originally making the attachment or assigning the support.

(3) The distribution of Army aviation and the tactical air support sortie allocation may apply for 1 or several days, for the duration of an operation, or for any phase of an operation; however, the apportionment, allocation, and distribution normally are reviewed and confirmed daily.

2-4. Categories of Tactical Air Support Requests

a. Preplanned and immediate are the two categories of requests for tactical air support:

(1) Preplanned is a request for air support on a target or for an operation that can be identified or anticipated sufficiently in advance to permit detailed mission coordination and planning.

(2) Immediate is a request for air support on a target or for an operation that *cannot be* identified or anticipated sufficiently in advance to permit detailed mission coordination and planning.

b. Of the two categories, preplanned support is the more efficient and economical use of resources; therefore, every effort is made to preplan all air support requirements. Preplanned requests—

(1) Allow sufficient time for thorough planning, coordination, briefing, and consolidation of requirements.

(2) Permit the proper selection of aircraft, sensor, ordnance, or delivery system.

(3) Contribute to safety and air-delivery accuracy.

c. Preplanned requests are submitted as early as the tactical situation permits. The field army and tactical air force commanders jointly determine the cutoff time for receipt of preplanned air support requests. Normally, this time is during the evening before the day of execution. Requests received after the established time are processed as immediate requests.

d. Preplanned missions are particularly desirable from an air defense standpoint because the flight paths and areas of action are known sufficiently in advance to facilitate positive identification and control.

e. Immediate requests are submitted to meet unforeseen contingencies that arise during operations. They are characterized by a limited reaction time and a lack of time for detailed planning and coordination. This type of request usually cannot be avoided; therefore, planning must include provisions to meet these contingencies. Normally, a portion of the available air support is held in reserve for this purpose. The size of the reserve varies with each tactical situation. The amount to be held in reserve is determined daily based on mission, tactical situation, availability of air support, and any other factors influencing tactical operations. The size of this reserve is reduced and the sorties are employed against lesser priority targets as the requirement for immediate air support becomes smaller. Care must be exercised to insure that sorties are not lost as a result of withholding too large a reserve or waiting too long to commit it. If the reserve is exhausted, requirements for immediate air support may be met by diverting low-priority preplanned missions or diverting aircraft engaged in other operations. Any Army commander who approved the original request may prove a diversion. The headquarters that made the original request is notified of the diversion.

2-5. General Request Procedures

a. Air support requests can be initiated at any Army level of command. The requesting unit commander or an authorized representative approves or disapproves all requests. Members of the air element providing air support act only as advisers. When the commander at a headquarters approves a request, it becomes a requirement of that echelon. Any intervening headquarters in the request channel can—

(1) Approve the request and forward it to the appropriate action agency.

(2) Substitute another type of support, e.g., artillery for air fire support.

(3) Disapprove the request.

b. Just as air support requests may be satisfied by substituting a different type of support, requests for artillery fires, ground reconnaissance, or surface movements may be converted to requests for air support by any headquarters above the requester. The most effective and economical means available is used to satisfy the requirement.

c. Air support requirements are accomplished by the lowest echelon possessing the capability to fulfill the requester's need. Requirements may be met by using allocated air sorties or by employing organic, attached, or supporting Army aviation elements.

d. In all cases, the requesting headquarters is notified of the action taken by the headquarters having final authority.

2-6. Request Channels

a. *Preplanned Requests.* Requests for preplanned tactical air support missions are submitted to the tactical operations center at division and higher echelons or to the fire support coordination center at battalion and brigade. Each command echelon evaluates, consolidates, and, if approved, assigns a priority; forwards the approved requests to the next higher echelon; or routes the requirement to the appropriate staff section or executing agency for action. The tactical air support element of the field army tactical operations center makes the final consolidation and approves preplanned requests for close air support and tactical air reconnaissance. In the case of airlift requests, the field army support command movement control center makes this consolidation and provides the approval. After field army approval, the requests are passed to the Air Force tactical air control center for execution. The requester is notified of the approval. The requester is also notified if the requests are disapproved at any echelon. The tactical air control center accomplishes the necessary planning and issues orders for execution. Orders for preplanned tactical air support missions are passed to subordinate commands of both the tactical air force and field army to insure complete understanding and full coordination of effort.

b. *Immediate Requests.*

(1) Immediate requests initiated below battalion level are forwarded to the battalion com-

mand post by the most rapid means available. At battalion, the commander or his authorized representative considers each request and passes approved requests to the tactical air control party. The tactical air control party transmits the request directly to the direct air support center collocated with the tactical air support element of the corps or separate division tactical operations center. Tactical air control parties at intermediate headquarters monitor the request and acknowledge receipt. Acknowledgment of the request by intermediate tactical air control parties indicates approval by the associated headquarters unless, within a specified period, a disapproval is transmitted. If a commander desires that approval be stated by specific transmission, the procedure is contained in the unit standing operating procedure (SOP). The direct air support center passes the request to the corps tactical air support element or the corps support brigade movement control center (MCC) for action and coordination. Meanwhile, intermediate tactical air control parties pass the request to the associated headquarters for action and coordination. All echelons coordinate simultaneously. If any Army echelon above the initiating level disapproves a request or substitutes another support means, the tactical air control party at that headquarters notifies the direct air support center and the originating tactical air control party, who notifies the requestor. If the Army headquarters where the direct air support center is located or a higher headquarters disapproves the request or substitutes another means, the direct air support center notifies the originating tactical air control party, who notifies the requestor. Pending approval of the request by the appropriate Army echelon, the direct air support center accomplishes the planning and coordination necessary to satisfy the request. When the Army commander or his representative approves the request, the direct air support center immediately orders the mission flown. If all allocated sorties are committed, the direct air support center obtains additional sorties from tactical air control center or, with supporting Army approval, diverts lower priority sorties.

(2) Immediate requests may be forwarded directly from company level to the direct air support center if a forward air controller (FAC) with adequate communications is located with the company. In this case, the battalion tactical air control party functions identically as the tactical air control parties of intermediate headquarters described above.

2-7. Priority and Precedence of Air Support Requests

a. Priority.

(1) All tactical air support requests—preplanned or immediate—are assigned a priority by the requesting unit. This priority is an indication of the relative importance of the request to the tactical situation of the requester. Priority does not determine whether the request will be accomplished or the final order of its accomplishment. The headquarters authorized to take final action on the request determines this when the request is evaluated for its contribution to the overall mission of the command.

(2) When appropriate, intervening headquarters that approve or forward the request should enter a remark in the remarks or special instructions section of the request, indicating the relative importance of the request to that level of command. The priority established by the requesting unit remains with the request until final approval action is taken. When several requests are consolidated, the headquarters making the consolidation enters a priority to indicate the relative importance of each mission in the consolidated request to the overall mission of the command.

(3) The priority of a request is indicated by entering a Roman numeral "I through IV" in the priority section of the request. Priorities are the same for all types of air support; however, the description or criteria for determining the correct priority are different for air fire support, air reconnaissance, and airlift. These criteria are described in subsequent chapters for each type of support.

b. Precedence. Circumstances may arise in which a command may submit a number of requests having the same priority. In this case, the originating headquarters should assign a precedence or order of accomplishment to each request to further aid higher headquarters in determining the importance of the request to the requester. The precedence establishes a priority within a priority. A precedence is not required on all requests; however, when the request volume is high and when air support resources are limited, it should be included. The precedence is entered in the remarks or special instructions section of the request form.

2-8. Numbering Air Support Requests

a. Air support requests are identified by a request number consisting of a numeral, a letter of

the alphabet, and another numeral, e.g., 1A501. The first numeral identifies the type of request; the letter of the alphabet is a standing operating procedure alphabetic designation of the requesting unit; and the last numeral is the number of the request.

b. The types of air support requests and the number identifying a particular type are—

1. _____ air fire support
2. _____ air reconnaissance
3. _____ airlift

c. Alphabetic designation of units for air support request purposes normally is contained in the field army standing operating procedure. Each unit in the field army may be assigned a designation or major subordinate commands may be assigned blocks of letter designators. These commands, in turn, make the unit designations. When the alphabet is exhausted, a double letter system is employed, e.g., AA, AB, AC, ***, BA, BB, ***, FA, FB, etc.

d. Requests are numbered consecutively by calendar year beginning with 1 in each unit. The request number assigned by the unit originating the request is retained throughout all processing. When requests are consolidated, each original number should be placed in the remarks or special instructions block of the consolidated request form so that each request retains its identity.

e. Coordination should be effected with the appropriate agency of the tactical air control system to insure that the Army request number is included in the tactical air force fragmentary order to aid in identifying requests. Normally, the fragmentary order includes the number parenthetically behind the tactical air force mission number; however, the tactical air force commander determines the procedure to be followed.

2-9. Conditions of Readiness

a. The primary conditions of readiness for air support are—

(1) Ground (deck) alert, in which aircraft are on the ground (deck) but are fully serviced with combat crews prepared to respond within a specified time after receipt of mission orders.

(2) Air alert, in which aircraft are airborne in the battle area standing by to meet requirements for immediate air support.

b. As with preplanned requests, ground (deck) alert is the more efficient and economical use of available air support resources; therefore, this

condition of readiness is preferred over air alert. The disadvantage of greater response time can partially be overcome by operating aircraft from forward areas and by enhancing the state of readiness of the aircrews. When response time is extremely critical, aircrews can remain in the aircraft prepared to take off except for starting the engine. Ground (deck) alert—

(1) Allows more time for planning, coordination, briefing, and consolidation of requirements.

(2) permits the selection of the most effective aircraft, sensor, ordnance, or delivery system.

c. Air alert reduces the reaction time in responding to requirements for air support; however, this condition is most often wasteful since it offers no latitude in selection of aircraft, armament, sensor, or delivery system. Air alert is employed only when other conditions of readiness cannot meet the Army commander's requirements and there is a high degree of assurance that the sortie will be used.

d. A condition of readiness is not restricted to a type of air support requirement. Aircraft to meet a preplanned requirement can be placed on either ground or air alert, as can aircraft designed to fulfill immediate requirements. Good planning dictates that, when a requirement is known or anticipated, a preplanned request be submitted and aircraft be positioned or placed in a condition of readiness that will allow the most rapid, effective response to the requirement.

2-10. Airspace Control

a. All airspace in the theater, particularly over the combat zone, is subject to use by all friendly forces. Theater policies for the coordinated use of this airspace are based on the necessity for permitting each participating force to fully utilize and exploit its air capabilities with minimum interference with other friendly forces.

b. Within the theater, the combined or joint force commander establishes the boundaries within which airspace control is to be exercised; provides the general priorities and restraints to be applied with regard for the requirements of all users of the airspace; and resolves differences that cannot otherwise be resolved by the component commanders concerned. He establishes the broad guidance necessary to insure coordination of the airspace operations of participating Services or national components. He may designate a single Service or national component commander as airspace control authority for the supervision of

these functions throughout the theater. When authority is so delegated, the combined or joint force commander normally retains approval authority for coordination measures of airspace utilization and air traffic control.

c. The Air Force component commander is normally designated as the airspace control authority for the theater with responsibility for coordinating the establishment of an airtraffic control system for use throughout the theater. In this effort, he coordinates with the Army component commander who establishes procedures for air traffic control in and over the field army area.

d. The Army component commander is delegated the authority necessary to employ his organic aircraft, air defense, and surface-to-surface fire support on an immediately responsive basis in the airspace over those land areas under his control. This delegation of authority normally is accomplished by the joint force commander through the airspace control authority. It is accomplished by assigning air traffic control authority within the "Army block of airspace."

e. Characteristics of the Army block of airspace follow:

(1) *Width.* The Army block of airspace extends across the width of the field army.

(2) *Depth.* The Army block of airspace extends from the field army rear boundary to the air traffic control line. The air traffic control line is located forward of the FEBA along terrain features readily identifiable from the air.

(3) *Altitude.* The coordination altitude delineates the upper limit of the Army block of airspace as jointly agreed upon or as directed by the theater commander. There is no set height at which this altitude is established; however, it is that altitude at which the preponderance of airspace usage changes from Army to Air Force.

(4) *Air traffic control.* The Army component commander establishes an air traffic regulation system within the Army block of airspace which is compatible with similar systems of other Services in the joint force.

2-11. Special Munitions

a. The procedures and the functions of the air-ground operations system generally are the same in an environment where special munitions are employed as in an environment where only conventional munitions are employed. The joint force

commander prescribes special procedures or modifications of doctrine deemed necessary for the employment of special munitions in tactical air operations.

b. Requests for special ammunition fires (nuclear, biological, and certain chemical fires) are transmitted through command channels to the commander or his representative authorized to act on the request. Concurrently, notification of the request is sent through fire support channels to alert fire support units and to insure prompt delivery of munitions. If tactical air resources are to be used to deliver the munitions, the agencies of the air-ground operations system offer advice and assistance on the employment of tactical air delivery means. On approval to employ any special munitions the agencies of the air-ground operations system insure that adequate warning is sent to tactical air organizations and agencies.

c. FM 61-100 contains a discussion of nuclear, biological, and chemical fires and request channels; FM 101-31-1 provides doctrine for the employment of nuclear munitions; and FM 3-10 contains doctrine for the employment of biological and chemical munitions.

2-12. Records and Reports

a. The number of records and reports varies with the requirements imposed by the headquarters and the tactical situation; however, they are kept to the minimum necessary for effective, efficient operations.

b. Permanent records normally consist of standing operating procedures and reference publications.

c. Temporary records normally consist of copies of requests; a journal; applicable current operation orders, plans, annexes, appendixes, or overlays; and a daily status and results board. These records are retained as long as required for current operations, usually 6 months. For historical purposes, the journal should be closed at the end of each period and forwarded to the appropriate staff agency for inclusion with the other records attached to the command journal.

d. There are no permanent or recurring reports prescribed for Army air-ground system agencies. Local commanders prescribe the temporary reports required and whether they will be of a recurring nature.

e. FM 101-5 contains suggested formats for the above documents.



CHAPTER 3

ORGANIZATION OF THE AIR-GROUND OPERATIONS SYSTEM

Section I. INTRODUCTION

3-1. General

The Air-Ground Operations System (AGOS) includes the personnel, equipment procedures, and techniques comprising the Army air-ground system (AAGS) and the tactical air control systems (TACS) of the Air Force. This system provides the means to initiate, receive, process and execute requests for air support and to disseminate information and intelligence produced by air means. Although the components and agencies of the air-ground operations system belong to different Services and sometimes to different nations, they function as a single entity in planning, coordinating, and integrating air support operations with ground operations.

3-2. Joint and Combined Force Organization

a. Joint forces are comprised of significant elements of two or more Services. They are identified as unified and subordinate unified commands and joint task forces. JCS Pub 2 sets forth the principal doctrine and functions for the organization and command of joint forces.

b. Combined forces are comprised of Services from two or more nations. Combined forces may be organized by national component, by functional component, or by a combination of these. Organization and command of combined forces are established by international agreement. FM 100-15 contains guidance on the organization and command of combined forces.

3-3. Responsibilities for Air Support

a. The U.S. Air Force is responsible for providing tactical air support to Army forces. A numbered tactical air force consisting of fighter bomber, reconnaissance, and tactical airlift units is placed in support of each field army. The size and the type of the tactical air force is determined by the joint force commander based on the mis-

sion, the enemy threat, the geographic area of responsibility, and the availability of forces. In addition to providing support throughout the field army area of responsibility, the supporting tactical air force also organizes composite airstrike forces to support subordinate commands of the field army assigned independent or separate missions.

b. Circumstances may be such that the responsibility for providing all or part of the tactical air support for Army forces is assigned to the Navy or Marine Corps, e.g., during amphibious operations. Under these conditions, the Navy component commander normally attaches a Fleet Marine Force air/naval gunfire liaison company to each Army division. This company performs the functions necessary to integrate Navy and Marine Corps tactical air support with Army operations and, in the case of dual Service air support responsibility, with operations of U.S. Air Force.

c. Army aviation units are part of the forces provided to the Army component commander to execute the ground combat portion of the joint force mission. Therefore, even though Army aviation units conduct air support operations, they do this as an element of the Army component rather than as tactical air support resources. The joint force commander may assign the Army component tasks that require the use of Army aviation; however, he does not include Army aviation in his apportionment of tactical air resources to accomplish the air combat functions.

d. The responsibility for the coordination of air-ground operations is shared equally by the Air Force and the Army component commanders. They have parallel control systems with facilities for coordination of tactical air support with land force operations and other air operations. Each of these systems possesses the flexibility required for adaptation to either large- or small-scale operations in varying intensities of warfare.

Section II. THE ARMY AIR-GROUND SYSTEM

3-4. General

a. The Army air-ground system begins at field army and extends through all echelons down to maneuver battalion. This system is used for coordinating and integrating both Army aviation support and tactical air support with Army ground operations. It also provides for exchange of intelligence and other information between joint force components at each echelon. The G3 (S3) is responsible for general staff supervision of all air-ground operations except combat service support airlift, which is the responsibility of the G4 (S4).

b. The Army air-ground system includes liaison, operations, intelligence, and combat service support personnel and facilities.

(1) Liaison personnel and facilities are—

(a) The Army liaison element at the tactical air control center. This liaison element, including its equipment, is provided by the field army and its subordinate organizations. Representatives for all aspects of tactical air operations are provided, to include command and control, close air support, air reconnaissance, airlift, air defense, and air traffic regulation.

(b) Army air defense and army aviation representatives at each Air Force control and reporting center. These personnel are provided from field army air defense and aviation organizations.

(c) Ground liaison officers (GLO) at the senior tactical fighter unit and at each tactical fighter base. These officers are provided from the field army G3 section.

(d) Liaison and imagery interpretation personnel of the military intelligence detachment, air reconnaissance support. These detachments are organic to the military intelligence battalion, air reconnaissance support MIBARS. One detachment is deployed with each squadron of the supporting tactical air reconnaissance wing. Each detachment is assigned an air reconnaissance liaison officer who provides liaison with the field army.

(e) Transportation movements officers at each tactical airlift base and at the senior tactical airlift headquarters. These officers and their equipment are provided by the field army support command.

(f) Army representation is not habitually required in the direct air support center since it is normally collocated with the corps tactical opera-

tions center. Exceptional circumstances will occur, however when the level of tactical air operations are such that the Air Force does not constitute a tactical air control center and substitutes a direct air support center as the senior Air Force command and control facility. In this case, Army representation from the supported command, scaled down to match the demand, is required. Other exceptions occur when an airborne direct air support center is employed to support airborne, airmobile, or amphibious assault operations. In these cases, representation from the supported unit is provided until a direct air support center can be collocated on the ground with the supported unit tactical operations center.

(2) Operations personnel and facilities are—

(a) The G3 air (S3 air) at each echelon from field army through maneuver battalion. These personnel are located in the tactical air support element of the tactical operations center at division and above and in the fire support coordination center at brigade and battalion.

(b) The fire support coordinator at each echelon from field army to maneuver battalion. At division and above, the fire support coordinator is located in the fire support element of the tactical operations center. At brigade and battalion, he is located in the fire support coordination center.

(c) The aviation officer at field army, corps, and division. The aviation officer is located with the G3 element in the tactical operations center. Below division, his functions are performed by the commander or a representative of the assigned, attached, or supporting aviation unit.

(d) Army aviation and air defense artillery representatives located in the airspace control element (ACE) of the tactical operations center at field army, corps, and division. Below division, their functions are performed by the commander or a representative of the assigned, attached, or supporting aviation and air defense artillery unit operating from the supported unit's operations center.

(3) Intelligence personnel and facilities are—

(a) The G2 air (S2/S2 air) at each echelon from field army to maneuver battalion. These personnel are located in the tactical air support element of the tactical operations center at division and above and in the fire support coordination center at brigade and battalion.

(b) Operations and intelligence personnel and facilities of the military intelligence battalion, air reconnaissance support (MIBARS) (TOE 30-6). The headquarters of this unit is located near the field army command post.

(c) Personnel of the aerial surveillance company (TOE 1-128). This company is assigned to corps and is located at the corps instrumented airfield. Direct support of corps subordinate units is provided when required.

(4) Combat service support personnel and facilities are—

(a) The transportation officer at field army, corps, and division and the S4 at brigade and battalion. The transportation officer operates at the main command post.

(b) Movement control centers (MCC) of the field army support command and its subordinate support brigades. Movement control centers are centrally located in the area of the organization served.

(5) Except in scope and magnitude, the responsibilities and functions of a component of the Army air-ground system are the same at each echelon; e.g., the responsibilities of the S3 air at maneuver battalion are essentially the same as those of the field army G3 air. The duties of principal individuals in the air-ground operations system are described by combat air task in succeeding paragraphs.

3-5. Air Fire Support

a. The G3 air (S3 air)—

(1) Advises on capabilities, recommends employment of close air support resources, approves or disapproves requests within delegated staff authority, and insures integration of all close air support with the ground tactical plan.

(2) Develops apportionment planning requirements for close air support including those of organic and attached subordinate elements.

(3) Receives allocations of close air support resources; coordinates suballocation of resources to meet preplanned and immediate mission requirements; requests additional support from Army or tactical air support sources, when required; and coordinates adjustment of suballocations when required.

(4) Receives, reviews, and coordinates approval of preplanned close air support requests and develops priorities for approved requests.

(5) Receives, reviews, and coordinates approval of requests for immediate close air support and coordinates approval with airspace control and fire support elements.

(6) In conjunction with the fire support coordinator, initiates requests for immediate and preplanned close air support.

(7) Maintains current status of close air support available to the command.

(8) Recommends location or changes in fire support coordination line (FSCL).

(9) Advises the tactical air control party of the ground tactical situation, the location of friendly units, restrictive fire plans, the location of the fire support coordination line, and other matters of importance to the conduct of close air support missions.

(10) Coordinates recommendations for interdiction of targets with fire support and tactical air support elements.

(11) Supervises the ground liaison officers and informs them of Army mission data on all close air support requests. Informs ground liaison officers of current tactical situation and monitors operation of ground liaison officer net.

(12) Controls transmission of traffic over the Army air request net.

(13) Prepares the air support appendix to the fire support annex to operation plans and orders.

b. The fire support coordinator (fire support element; fire support coordination center)—

(1) Advises on capabilities, recommends employment of fire support resources, provides command coordination of all fires on surface targets, and insures that air fires are integrated with the overall fire support plan.

(2) Provides planning information on air fire support to G3 air for development of apportionment recommendations.

(3) Reviews allocation of air fire support resources and recommends suballocation.

(4) Reviews all requests for fire support from subordinate units, evaluates request in light of other requirements, makes decisions within delegated authority to furnish requested support, substitutes other types of support, or recommends disapproval of request.

(5) Obtains target information from G2 and forwards targets suitable for immediate attack to appropriate fire support element.

(6) Receives, reviews, and coordinates approval of requests for direct aerial fire support; tasks aerial artillery units to execute approved requests.

(7) Maintains current status information on fire support available to the command.

(8) Monitors execution of all fire support missions to determine adequacy of mission accomplishment and coordinates poststrike damage assessment with the tactical air control party and the G2 air.

(9) Establishes fire support coordination measures at his echelon and maintains status of coordination and control measures or other restrictive fire measures established by adjacent and higher commands.

(10) Coordinates with airspace control element, the tactical air control party, and the G3 air on field artillery requirements for use of airspace and keeps all elements informed on status of planned special ammunition fires.

(11) Recommends targets for attack by air-delivered special ammunition fires and recommends air interdiction targets.

(12) Operates in the appropriate field artillery command and fire direction nets.

(13) Prepares fire support annex to operation plans and orders and insures that all fires are integrated by reviewing and approving component plans (e.g., field artillery, air, naval gunfire, and special weapon).

c. The aviation officer—

(1) Advises on capabilities and recommends employment of direct aerial fire support resources (less aerial artillery).

(2) Provides information to G3 air and the fire support coordinator for development of direct aerial fire support plans, coordinates with these staff elements on priorities of commitment and allocations to subordinate units, and insures that aviation units placed in support of subordinate units are positioned as requested by supported commander or as the situation required.

(3) Maintains current status information on direct aerial fire support availability and condition and availability of firing systems and ammunition (less aerial artillery).

(4) Advises Army aviation commanders of ground tactical situation, location of friendly units, restrictive fire plans, location of the fire

support coordination line, and other matters of importance to the conduct of the direct aerial fire support mission and coordinates the use of the airspace with the air defense elements, the tactical air control party, and the fire support coordinator.

(5) Operates station in the aviation operations net.

(6) Provides planning information on G3 air for preparation of air support plans and prepares Army aviation annex to operation plans and orders.

d. The airspace control element—

(1) Coordinates the use of airspace in accordance with higher headquarters' directives and the commander's concept for use of airspace by organic forces; in conjunction with the fire support element, determines how airspace requirements can best be met and issues necessary instructions.

(2) Coordinates Army air defense with other combat and combat support operations, makes continuous estimate of the air defense situation, and recommends allocation and employment of air defense means. Provides information on the air defense situation, including coverage, to other elements; and disseminates rules for engagement, minimum normal burst altitude, critical ammunition shortages, and capability for attack of surface targets. When air defense nuclear weapons are used, the airspace control element notifies the other elements and obtains and disseminates post-strike data, including time, location, and height of burst.

(3) Coordinates Army air traffic operations; determines prohibited or restricted areas or other restrictions imposed on air traffic by the commander, higher headquarters, or theater commander or through agreement with other Services; disseminates aviation control guidance (e.g., corridors, altitudes, areas in which all flights must be cleared); provides information for the preparation of the air traffic regulation plan to be included in the airspace utilization annex, and coordinates the plan. On approval by the G3 the airspace control element disseminates the plan to the Air Force and to Army aviation and air defense units as required. Through liaison with other elements, determines those combat and combat support activities that will influence air traffic, and disseminates changes to the air traffic control plan as required.

(4) Operates station in the aviation and operations net.

(5) Provides planning information on G3 air for preparation of air support plans and prepares airspace utilization annex to operation plans and orders.

e. The Army liaison element (ALE) located at the tactical air control center or direct air support center—

(1) Represents field army and corps commanders on tactical air support matters and keeps them informed of Air Force matters affecting the tactical air support mission.

(2) Advises and assists the tactical air force unit commander and staff on matters pertaining to Army operations.

(3) Assists in processing Army requests for close air support.

(4) Coordinates nuclear targeting.

(5) Coordinates Army plans for close air support with the Air Force component.

(6) Coordinates Army air defense and air traffic regulation matters with the Air Force component.

(7) Keeps the tactical air unit staff informed of the ground tactical situation.

f. The ground liaison officer—

(1) Advises and assists tactical fighter/bomber unit commanders on matters pertaining to Army operations.

(2) Maintains current ground tactical situation maps and keeps the tactical air unit staff and aircrews informed of the ground tactical situation such as location of friendly positions, location of FSCL, friendly identification procedures, and current restrictive measures.

(3) Assists in briefing and debriefing of fighter aircrews and reports information obtained to field army and corps G3 air.

(4) Coordinates delivery of Air Force special ammunition fires allocated to the Army.

(5) Coordinates Army plans for close air support with the tactical fighter/bomber unit.

3-6. Air Reconnaissance

a. The G2 air (S2 air)—

(1) Advises on capabilities; recommends employment of organic, attached, and supporting air reconnaissance resources; and insures that air reconnaissance operations are integrated into intelligence collection and ground tactical plans.

(2) Develops apportionment planning requirements for air reconnaissance including requirements of subordinate elements.

(3) Receives allocation of air reconnaissance resources; coordinates suballocation of resources to meet preplanned and immediate mission requirements; requests additional support from Army or Air Force sources, when required; and coordinates adjustment of suballocation with the Army aviation officer, the tactical air control party, and subordinate elements, when required.

(4) Receives; reviews; and, within delegated authority approves requests for preplanned air reconnaissance; and develops priorities for approved requests.

(5) Receives; reviews; and, within delegated authority, approves requests for immediate air reconnaissance.

(6) Initiates requests for immediate and preplanned air reconnaissance.

(7) Maintains current status of air reconnaissance support available to the command.

(8) Provides staff supervision of organic, attached, or supporting air reconnaissance units or personnel and coordinates and supervises the execution of air reconnaissance missions flown by these units.

(9) Provides staff supervision of military intelligence battalion, air reconnaissance support, and its detachments and air reconnaissance liaison officers and informs air reconnaissance liaison officers of current tactical situation.

(10) Provides for debriefing of Army aviation pilots and aircrews on completion of air reconnaissance missions.

(11) Provides intelligence information on enemy activities affecting the air mission to supporting Army aviation and the tactical air control party.

(12) Disseminates intelligence information gained through air reconnaissance and pilot reports and supervises distribution of imagery within the command. Information on targets warranting immediate attack is forwarded to the fire support element as rapidly as possible.

(13) Prepares air reconnaissance appendix to the intelligence annex to operation plans and orders.

b. The aviation officer—

(1) Advises on capabilities and recommends employment of Army aviation air reconnaissance resources.

(2) Coordinates allocation of organic, attached, and supporting Army air reconnaissance resources and insures that aviation resources placed in direct or general support are positioned as requested by supported commander or as the situation required.

(3) Maintains current status information on Army aviation availability and availability of ancillary equipment, such as communications, navigation, and sensor systems.

(4) Provides planning information for development of air reconnaissance plans and insures that Army air reconnaissance requirements are included in Army aviation annexes to operations plans and orders.

c. The fire support coordinator (fire support element, fire support coordination center)—

(1) Provides planning information to the G2 air on target acquisition requirements for development of apportionment recommendations.

(2) Provides for suppressive fires when required.

(3) Maintains current status information on conventional and special weapon fires and coordinates poststrike damage assessment with the G2 air and the aviation officer or the tactical air control party.

(4) Insures that target acquisition requirements, conventional fire plans, special weapon fire plans, and suppressive fire requirements are considered in air reconnaissance plans.

(5) Receives target information from G2 air and forwards fire mission instructions to appropriate artillery units on targets that require immediate attack.

d. The airspace control element—

(1) Provides intelligence information obtained through air defense and Army aviation channels to the G2.

(2) Disseminates intelligence information on local enemy activities to Army air defense and aviation units.

(3) Provides planning information for development of air reconnaissance plans and insures that Army air reconnaissance requirements are included in the airspace utilization annexes to operation plans and orders.

e. The army liaison element located at the tactical air control center or direct air support center—

(1) Represents the field army and corps commanders on tactical air reconnaissance matters and keeps them informed of Air Force matters affecting the tactical air reconnaissance mission.

(2) Advises and assists the tactical air force unit commander and staff on Army matters affecting the tactical air reconnaissance mission.

(3) Provides assistance in processing tactical air reconnaissance requests.

(4) Provides detailed information and coordination on tactical air reconnaissance missions.

(5) Keeps the tactical air control center informed on the essential elements of information, mission results desired, reports and imagery desired, and other information required.

f. The air reconnaissance liaison officer (military intelligence detachment, air reconnaissance support)—

(1) Maintains current air reconnaissance and ground tactical situation maps.

(2) Advises and assists tactical air reconnaissance squadron commanders on Army matters concerning air reconnaissance such as detailed explanation of mission results desired, essential elements of information, friendly troop disposition, location of fire support coordination line, friendly identification markings, and information on friendly restrictive measures.

(3) Assists in briefing and debriefing air reconnaissance pilots and aircrews and provides reports of information obtained to the military intelligence battalion, air reconnaissance support, and the field army and corps G2 air.

(4) Supervises operation of station in the military intelligence battalion, air reconnaissance support, operations net.

3-7. Airlift

a. The transportation officer (S4, movement control center)—

(1) Advises on capabilities and recommends employment of organic, attached, and supporting airlift resources.

(2) Develops apportionment planning requirements for airlift, including requirements of subordinate elements.

(3) Receives allocation of airlift resources; coordinates suballocation of resources to meet preplanned and immediate requirements; requests additional support from Army aviation and Air

Force sources, when required; and coordinates adjustment of suballocation with Army aviation officer, the tactical air control party, and subordinate elements, when required.

(4) Receives, reviews, and coordinates approval of preplanned airlift support requests and develops priorities for approved requests.

(5) Receives; reviews; and, within delegated authority, approves requests for immediate airlift support.

(6) Initiates requests for immediate and preplanned airlift support.

(7) Maintains current status of airlift support available to the command.

(8) Coordinates and supervises the execution of airlift support missions flown by organic, attached, or supporting Army aviation units.

(9) Furnishes supply and management services incident to airlift operations.

(10) Informs supporting Army aviation and Air Force organizations on the location of logistic installations and provides other combat service support information, as required.

(11) Provides staff supervision of airlift liaison officers and transportation movements officers.

(12) Prepares airlift portion of movement annex to operation plans and orders.

b. The aviation officer—

(1) Advises on capabilities and recommends employment of Army airlift resources.

(2) Provides information to transportation officer for development of apportionment recommendations.

(3) Coordinates allocation of organic, attached, and supporting Army airlift resources and insures that aviation resources placed in direct or general support are positioned as requested by supported commander or as the situation requires.

(4) Receives, reviews, and coordinates requests for Army airlift; tasks subordinate aviation units to execute requirements approved for Army aviation; and requests assistance from next higher echelon when requirements exceed capabilities.

(5) Maintains current status information on Army aviation capability, configuration, and availability.

(6) Monitors performance of Army airlift operations to insure adequate mission performance and coordinates airspace utilization with the fire support coordinator and the tactical air control party.

(7) Coordinates briefing and debriefing of pilots before and after missions.

(8) Disseminates information on logistic installations and other combat service support to Army aviation units.

(9) Provides information for development of movement plans and insures that airlift requirements are included in Army aviation annexes to operation plans and orders.

c. The fire support coordinator (fire support element, fire support coordination center)—

(1) Coordinates field artillery requirements for use of airspace with the airspace control element and the tactical air control party when fire plans are in conflict with air movement plans; provides suppressive fire for airlift elements; and coordinates planned fires with airlifted elements and the aviation officer or the tactical air control party.

(2) Monitors pilot debriefings to obtain target intelligence information.

(3) Provides information on fire plans, suppressive fire requirements, and residual special weapon hazards for consideration in air movement plans.

d. The airspace control element—Provides information for development of movement plans and insures that airlift requirements are included in airspace utilization annexes to operation plans and orders.

e. The transportation movements officer—

(1) Maintains current airlift situation information and advises movement control center of Air Force matters affecting airlift situation.

(2) Advises Air Force airlift commander and staff on Army requirements, priorities, and other matters affecting airlift situation.

(3) Serves as principal point of contact between Air Force and Army for coordinating movement of Army personnel and cargo.

(4) Provides onsite movement management of Army personnel and cargo at Air Force air terminals and transfer points.

Section III. THE AIR FORCE TACTICAL AIR CONTROL SYSTEM

3-8. General

a. The Air Force tactical air control system begins at the Air Force component command level and extends through all operating echelons. It is a system of personnel, facilities, sensors, and communications through which the Air Force component commander plans, coordinates, and directs the resources available to him for the conduct of tactical air operations. This system also provides the organization and equipment necessary to coordinate Air Force operations with other Service components.

b. The various agencies of the tactical air control system are described in succeeding paragraphs by functional groups: command and control of Air Force elements, command and control of tactical air operations, air traffic control and direction, and weather information and service.

c. Figure 3-1 illustrates the components of a typical Air Force tactical air control system and the Army command level at which each component is located. The system may be modified by additional elements, or existing elements may be reinforced to support independent or separate Army operations.

3-9. Command and Control

a. *Air Force Component Command Post.* The Air Force component command post (AFCCP) is the senior Air Force headquarters in the theater. The Air Force component command post plans, directs, controls, and coordinates the full range of tactical air operations and support.

b. *Airborne Command Post.* The airborne command post is a specially equipped transport aircraft used by the Air Force component commander during deployments for en route and interim terminal control of his forces. After the Air Force component command post is established and operational, the airborne facility remains available to the commander for use as the situation requires.

3-10. Tactical Air Operations Agencies

a. *Tactical Air Control Center.*

(1) The tactical air control center (TACC) is the operations center of the Air Force component. It is equivalent to the senior army tactical operations center (TOC). Communications are provided

with higher and adjacent headquarters, subordinate units, and agencies of the tactical air control system collocated with Army units. Army liaison elements are located at the tactical air control center to facilitate coordination of air-ground operations.

(2) The tactical air control center prepares the daily air operations combat plan and directs current weapon employment. Specifically, the tactical air control center—

(a) Provides centralized control and direction of tactical air operations.

(b) Plans and monitors current tactical air operations.

(c) Provides tactical air support sorties to Army forces based on the apportionment decision of the joint force commander and the allocations made by the field army commander.

(d) Allocates and directs Air Force effort for air defense operations, but normally decentralizes execution of the air defense task to the control and reporting center (CRC).

(e) Plans and directs counterair (antiair) operations.

(f) Plans and directs air interdiction operations.

(g) Commits preplanned tactical air support sorties to meet Army requirements.

(h) Provides advance echelon or alternate Air Force component command posts, when required.

(i) Maintains communications with the joint force headquarters; Army component headquarters; direct air support center; airlift control center (ALCC); tactical air units; control and reporting center; and, when applicable, combined operation facilities.

(j) Develops policies and procedures for air traffic control in airspace controlled by the Air Force.

(k) Through the tactical air control center weather team, provides direct support to the Air Force component command post and weather information over tactical communications circuits to support the control and reporting center, control and reporting post (CRP), direct air support center, airlift control center, air traffic regulation center, tactical air units, and Army forces.

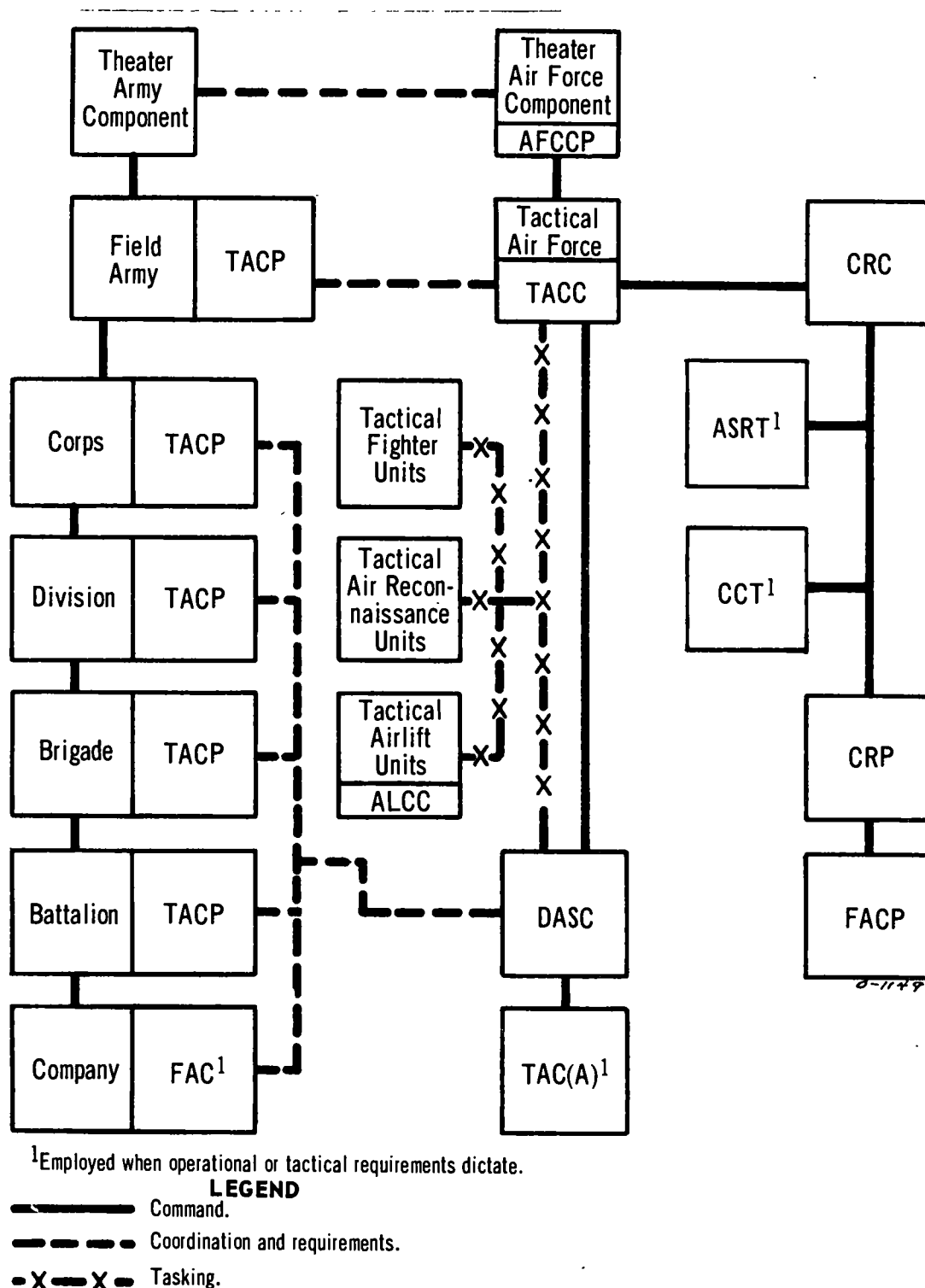


Figure 3-1. Components of the Air Force tactical air control system.

(3) When operating with North Atlantic Treaty Organization (NATO) forces, the tactical air control center may be referred to as the air support operations center (ASOC).

b. Direct Air Support Center.

(1) The direct air support center is a mobile,

air-transportable facility designed to operate with a corps tactical operations center (CTOC) or an independent division tactical operations center (DTOC). It functions as a forward element of the tactical air control center in the operational command channels of the tactical air control system.

The primary task of the direct air support center is to provide a fast-reaction capability to satisfy immediate requests from Army forces for tactical air support. Since the direct air support center is collocated with the supported unit tactical operations center, Army liaison is normally not required.

(2) An augmented tactical air control party, identified as a direct air support center (reduced), performs the direct air support center functions for independent field army maneuver units of brigade or smaller size. A provisional direct air support center or augmented division tactical air control party is provided for separate or independent division operations.

(3) The direct air support center—

(a) Receives, plans, and coordinates Army requests for immediate tactical air support. Missions are flown as soon as the Army approves the requirement.

(b) Acts as an advisory agency to the supported Army tactical operations center (tactical air support element).

(c) Keeps the tactical air control center advised of the effort needed to satisfy Army tactical air support requirements.

(d) Operates and provides net control for the Air Force air request nets.

(e) Coordinates with the associated Army tactical operations center (tactical air support element) on the detailed integration of tactical air support with the fire and maneuver of the land forces.

(f) Requests additional tactical air support effort from the tactical air control center when requirements exceed the sorties allocation.

(g) Informs the tactical air control party of current and planned air operations and provides overall supervision of tactical air control party activities.

(h) Exchange weather information with the tactical air control center and the associated Army tactical operations center (tactical air support element).

(4) When the level of tactical air operations is such that the full command and control capabilities of a tactical air control center are not required, a direct air support center may be substituted as the senior Air Force operations center (a(1) above). In this case, liaison from the supported Army force similar to that provided the

tactical air control center, but scaled down to meet the demand is required.

c. Airborne Direct Air Support Center. An airborne direct air support center is a specially equipped and staffed transport aircraft used to provide an interim capability for processing Army immediate requests for tactical air support under special circumstances, such as an airborne assault. It accomplishes the direct air support center functions from an airborne station until the direct air support center becomes operational. Liaison from the supported unit is provided in the airborne direct air support center.

d. Tactical Air Coordinator (Airborne). The tactical air coordinator (airborne) (TAC(A)), when employed, is an airborne coordinator for aircraft engaged in close air support of land forces. He assists tactical air control parties and the direct air support center by providing airborne control, marking targets, and coordinating the efforts of the fighter aircraft.

e. Tactical Air Control Party.

(1) *General.*

(a) The tactical air control party is an element of the tactical air control system habitually attached to battalion, brigade, separate brigade and regiment, division, corps, and field army. Elements of the battalion tactical air control party operate at company as required by the tactical situation and the tactical air support being provided. The tactical air control party advises the associated ground commander on all aspects of tactical air support operations, forwards immediate requests, and coordinates and controls tactical air support furnished Army forces. The tactical air control party can control and coordinate the tactical air support provided by other Services when control elements of the other Services are not available.

(b) The division and corps tactical air control parties normally are located with the tactical air support element of the tactical operations center. Tactical air control parties below division normally are collocated with the respective fire support coordination centers (FSCC). Tactical air control parties are equipped and manned by the Air Force, except for special-purpose vehicles such as armored personnel carriers that enable the tactical air control party to move and function with all maneuver elements.

(c) Composition of the tactical air control party is varied to meet the requirements of the

command echelon served. At battalion, it will normally include an air liaison officer, forward air controllers, and communications personnel and equipment. At brigade, it will normally include only the air liaison officer and communications personnel and equipment. However, at these levels the tactical air control party will be augmented with additional forward air controllers, if the situation requires. Tactical air control party officers are knowledgeable in tactical air reconnaissance and tactical airlift matters and provide advice and assistance on these functions. When necessary, however, specialist officers in these fields are provided. The division tactical air control party consists of the Tactical Air Control Party Commander, fighter operations officers, air reconnaissance operations officers, airlift operations officers, and communications personnel and equipment collocated with the tactical air support element of the division tactical operations center. The functions of the division and brigade tactical air control party are essentially the same as those at battalion except that division tactical air control party personnel seldom are responsible for the control of airstrikes. Their primary responsibilities are to provide advice and assistance. Corps and field army tactical air control parties may be larger than the tactical air control party at division but the functions and duties are the same. The duties of the tactical air control party for each air support task are described in (2) through (4) below.

(2) *Close air support.* The tactical air control party—

(a) Advises on capabilities, provides planning information and assistance to the ground force commander and staff on all aspects of close air support, and further provides liaison between Army and Air Force to insure integration of plans.

(b) Assists G3 air in developing apportionment recommendations for close air support.

(c) Advises higher and lower echelon tactical air control parties and the direct air support center of suballocations made by G3 air.

(d) Reviews and advises on approval of preplanned close air support requests.

(e) Receives and advises on approval of requests for immediate close air support; forwards requests to the direct air support center or, at field army, to the tactical air control center when approved by the Army.

(f) Maintains current status information on availability of close air support resources.

(g) Coordinates airspace utilization with the fire support coordinator and the airspace control element and controls execution of close air support missions flown in support of ground forces; receives visual observations and poststrike damage reports from pilots; and passes information obtained to G3 air, G2 air, and the fire support coordinator.

(h) Disseminates, through Air Force channels, information concerning ground tactical situation, location of friendly units, restrictive fire plans, location of fire support coordination line, and enemy ground activities affecting the air support mission.

(i) Advises and assists G3 air and the fire support coordinator in preparing recommendations for targets to be attacked by air-delivered special weapons and for air interdiction targets.

(j) Operates stations in Air Force air request net (HF-SSB/AM-voice), tactical air direction net (UHF/AM-voice), and the local ground operations net (FM-voice).

(k) Provides information and assistance to ground unit staff for preparation of air support operation plans and orders and informs staff of Air Force plans and orders affecting the ground tactical plan.

(3) *Air reconnaissance.* The tactical air control party—

(a) Advises on capabilities, provides planning information and assistance to ground force commander and staff on all aspects of tactical air reconnaissance, and also provides liaison between Army and Air Force to insure integration of plans.

(b) Assists G2 air in developing apportionment planning recommendations for tactical air reconnaissance.

(c) Advises higher and lower echelon tactical air control parties and the direct air support center of suballocations made by the G2 air.

(d) Reviews preplanned tactical air reconnaissance requests and advises on their approval.

(e) Receives and advises on approval of requests for immediate tactical air reconnaissance; forwards approved requests to direct air support center or at field army, to the tactical air control center.

(f) Maintains current status information on tactical air reconnaissance capability and availability.

(g) Coordinates airspace utilization with fire support coordinator and airspace control element and controls execution of tactical air reconnaissance missions flown in direct support of ground forces.

(h) Receives inflight reports of damage assessment and other visual observations from pilots and crews and passes information obtained to G2 air.

(i) Passes intelligence information on local enemy activities to higher and lower echelon tactical air control parties and to pilots.

(j) Disseminates intelligence information on matters affecting the tactical air reconnaissance mission to higher and lower Air Force echelons.

(k) Provides information and assistance to G2 air for preparation of tactical air reconnaissance portion of operation plans and orders and informs G2 air of Air Force tactical air reconnaissance plans that may affect the local intelligence collection plan.

(4) *Airlift.* The tactical air control party—

(a) Advises on capabilities, provides planning information and assistance to ground force commander and staff on all aspects of tactical airlift, and also provides liaison between Army and Air Force to insure integration of plans.

(b) Assists transportation officer in developing apportionment planning recommendations for tactical airlift.

(c) Advises higher and lower echelon tactical air control parties and airlift control center of suballocations made by the G4.

(d) Reviews and advises on approval of preplanned tactical airlift requests.

(e) Receives and coordinates requests for immediate tactical airlift and passes requests to the airlift control center.

(f) Receives and coordinates locally initiated requests for immediate and preplanned tactical airlift and passes requests to the airlift control center.

(g) Maintains current status information tactical airlift capability, configuration, and availability.

(h) Coordinates airspace utilization with the fire support coordinator and the airspace control center is located near, or is operationally connected with, missions flown in direct support of ground forces.

(i) Insures briefing of pilots on anticipated landing zone/drop zone conditions prior to mission execution; receives inflight reports of visual observations and passes information to G2.

(j) Disseminates information on logistic installations and other combat service support to higher and lower echelon tactical air control parties and to pilots.

(k) Provides information and assistance to transportation officer for preparation of tactical airlift portion of operation plans and orders and informs transportation officer of Air Force plans that may affect the local air movement plan.

f. Airlift Control Center. The airlift control center is a subordinate element of the tactical air control center where the detailed planning, coordination, and tasking for airlift operations are accomplished. Since the tactical airlift force supports all Services involved in a joint operation, Service representatives are normally positioned in the airlift control center to accomplish liaison and coordination for their component. The airlift control center is located near, or is operationally connected with, the tactical air control center.

g. Airlift Control Element. Airlift control elements (ALCE) are established at airfields and landing zones to provide aircraft movement control, communications, supervision of loading and off-loading teams, coordination of aeromedical evacuation, and continuous liaison with supported Services. The airlift control element has operational control of all tactical airlift resources participating in an operation while they are on the ground at the operation site. Each Service component being supported is represented in the airlift control element.

3-11. Air Traffic Control and Direction Agencies

a. Control and Reporting Center. The control and reporting center provides radar control and surveillance within its assigned area of responsibility. It collects, evaluates, and disseminates information on air activity. The control and reporting center provides early warning and identification to air defense elements and provides radar control of tactical air support missions. Army air

defense and aviation representatives are located in the control and reporting center.

b. Control and Reporting Post. The control and reporting post is subordinate to the control and reporting center and provides radar control and surveillance in an assigned area of responsibility. Control and reporting posts can assume control and reporting center functions in an emergency.

c. Forward Air Control Post. The forward air control post is a lightweight, highly mobile radar surveillance and control facility. It provides radar surveillance and control in the forward combat area as designated by the control and reporting center. The forward air control post is primarily responsible for radar control of tactical air support missions to and from designated control points for handoff to forward air controllers directing close air support strikes. Forward air control posts may function as control and reporting posts, when necessary.

d. Air Traffic Regulation Center. The air traffic regulation center is the primary agency through which the Air Force controls air traffic in its assigned airspace. Normally, it is an integral part of the control and reporting center.

e. Air Support Radar Team. The air support radar team is a mobile unit equipped with precision radar to provide guidance for tactical fighter aircraft during attacks against ground targets in marginal weather. This team may also be used to position tactical air reconnaissance and tactical airlift aircraft over predetermined coordinates.

f. Combat Control Team. A combat control team consists of Air Force personnel organized, trained, and equipped to identify and mark drop, landing, or extraction zones. The combat control team also provides limited weather observations, installs and operates navigational aids and communications, and, in the absence of an established air traffic control facility, controls Air Force traffic in an airhead area.

3-12. Air Weather Service

Weather detachments are an integral element of the tactical air control system at all levels. They observe, analyze, forecast, report, and advise on weather conditions and their influence on tactical air support missions. Their services are provided to Army forces, when required. Additional information is contained in FM 30-5.

Section IV. THE NAVY/MARINE TACTICAL AIR CONTROL SYSTEM

3-13. General

a. Tactical air forces of the Navy and Marine Corps execute the functions of counterair (anti-air), interdiction, and air support of naval operations. In amphibious operations, the Navy is responsible for tactical air support operations.

b. The airlift capability available to Navy and Marine Corps forces is limited and is normally required for support of their own forces. Therefore, the tactical air support furnished the Army by the Navy and Marine Corps usually consists only of tactical air reconnaissance and close air support.

c. The Navy/Marine tactical air control system is similar to the Air Force system. However, it includes additional control and coordination facilities to meet the special requirements of naval operations. FM 31-11 contains a detailed discussion of the Navy/Marine tactical air control system and the additional facilities included in the system.

3-14. Navy/Marine Support of Army Forces

a. The Navy/Marine tactical air control system contains an air/naval gunfire liaison company (ANGLICO) to control and coordinate tactical air support of Army Forces up to division size. The Navy component provides provisional liaison organizations to coordinate air support activities with Army echelons above division.

b. The air/naval gunfire liaison company, a Fleet Marine Force unit, provides personnel and equipment for obtaining and controlling naval gunfire and naval and marine tactical air support furnished U.S. divisions, Allied divisions, combined forces, or elements thereof. These organization provides qualified Navy and Marine Corps personnel to advise on the capabilities, limitations, and employment of naval gunfire and naval and marine tactical air support and the organization and communications needed to request, direct, and control this support. Figure 3-2 illustrates the organization of this company.

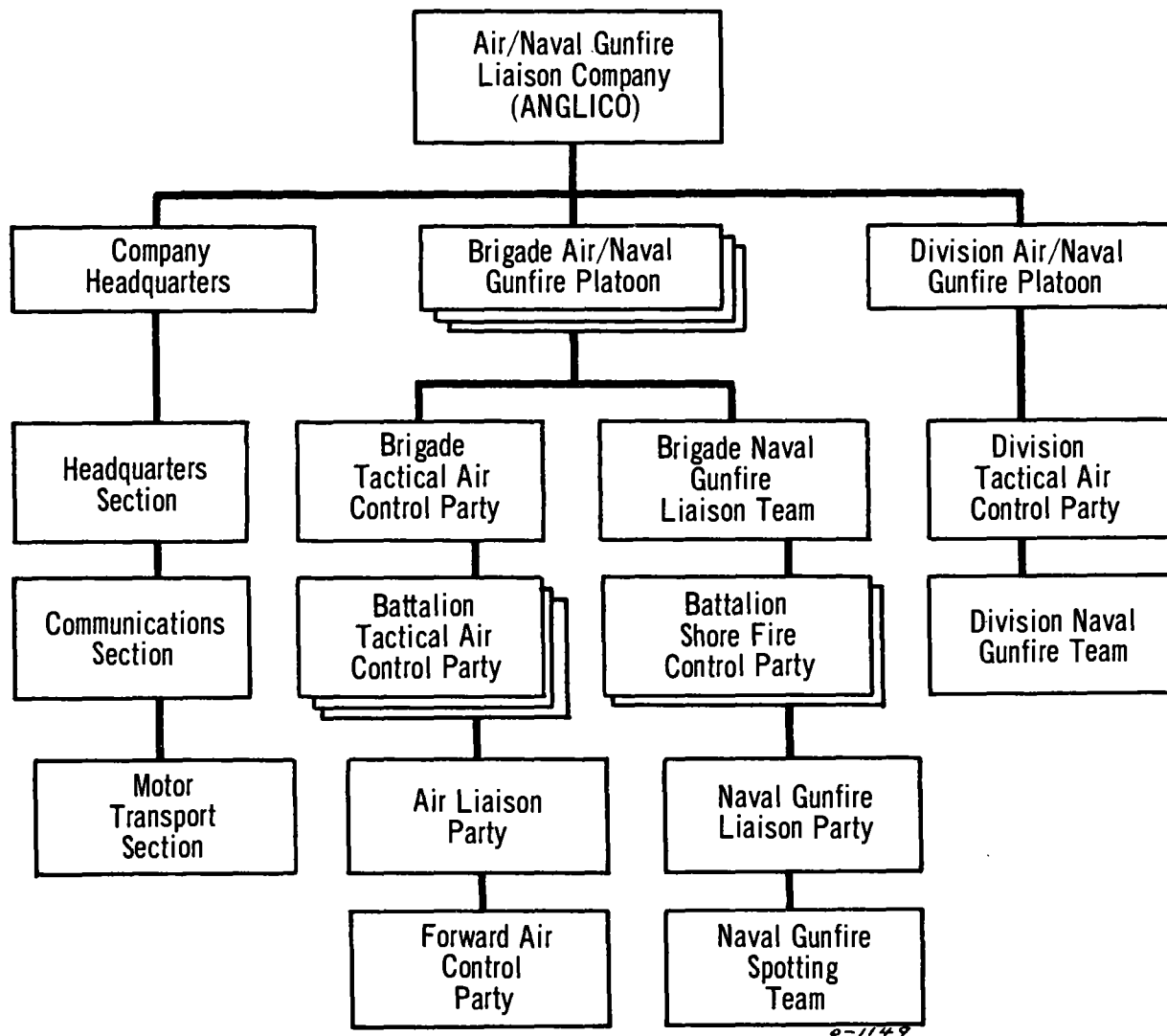


Figure 3-2. Air/naval gunfire liaison company, Fleet Marine Force.

Section V. AIR-GROUND OPERATIONS SYSTEM COMMUNICATIONS

3-15. General

a. Communications are an essential element of the air-ground operations system. They provide the primary means of transmitting requirements between headquarters and the facilities for processing and disseminating information and intelligence resulting from tactical air operations. Communication media make possible the coordination of air support operations with the other air combat functions and the integration of tactical air operations with ground tactical operations.

b. Both the Air Force and the Army components furnish personnel and equipment to operate the communications net required to receive and process requests for air support and to disseminate

information and intelligence resulting from air support operations. The nets discussed in c below are the primary means. There are alternate means available which should be used, when necessary.

c. Air-ground communications consist basically of two communication systems—an Army system and an Air Force system. The Army system is used for requesting preplanned air support and for coordinating air operations with ground operations. The Air Force system is used for requesting immediate air support and for controlling close air support, tactical air reconnaissance, and tactical airlift missions.

d. Figure 3-3 is a summary of the principal communications nets of the air-ground operations system.

NET ELEMENT	AF Air request net (voice) (voice)	AF tactical air direc- tion net (voice)	Field army air request Net (RATT)	MIBARS Opns Net (RATT)	GLO Net (RATT)	Corps Aerial surv, and recon opns net (voice)	Air mobile div G2 air infor- mation net (RATT)
Field army	X ¹	X ¹	NCS	X	NCS		
Corps	X ¹	X ¹	X	X	X	X	
DASC	NCS	NCS					
Div main	X ^{1 2}	X ^{1 2}	X ²				
DTOC	X ¹	X ¹	X				NCS ³
Div arty							
Bde	X ¹	X ¹					
Mvr bn	X ¹	X ¹					
Cav sqdn	X ¹	X ¹					X ³
Avn gp (airmb)							X ³
Avn bn (AIM)							
Corps Aerial Surv Co						NCS	
MIBARS				NCS			
ARLO				X			
GLO					X		

G-1678

¹TACP net, Equipment provided by AF.²Located at div main in airborne div only.³Tentative TOE authorization.**LEGEND**

NCS—Indicates net control station.

X—denotes receiver-transmitter.

Figure 3-3. Summary of air-ground operations communications nets.

3-16. Tactical Air Force Air-Ground Nets

a. The Air Force component commander is responsible for establishing organic communications systems and any joint communications facilities directed by the joint force commander. The tactical air force command post is the focal point of the tactical air control communications system. This system provides the air component commander with the communications necessary to command and control tactical air operations and to coordinate these operations with those of Army forces. In addition to the primary facilities, which provide point-to-point, air-to-air, and air-to-ground communications, alternate facilities are available. Compatible radio equipment terminates radio networks between Army forces and tactical air force units at any echelon required.

b. Separate nets for command, control, and direction of tactical air support efforts are included. Of interest to Army commanders are—

(1) The Air Force air request net, which is an element of the Air Force command and control network. It is the primary means for forwarding immediate requests for tactical air support to the direct air support center. This net also provides backup to Army communications for preplanned requests.

(2) The in-flight report net, which is used by tactical air support pilots for airborne transmission of visual observations of immediate interest, such as airstrike results and intelligence information.

(3) The tactical air direction net, which is used by the tactical air control party, combat control team, direct air support center, control and reporting center, control and reporting post, and the forward air control post (FACP) to direct and control tactical air support aircraft. Each tactical air control party and each combat control team acts as net control for a tactical air direction net. The direct air support center can enter any of these nets as required. The control and reporting center, control and reporting post, and forward air control post are also provided air-ground radios that can enter any net for direction purposes.

3-17. Army Air-Ground Communications Nets

a. The field army commander is responsible for establishing the communication facilities to submit preplanned air support requests and to disseminate information and intelligence obtained through air support means. He uses wire, messen-

ger, radio, or any combination of these means to insure rapid, accurate transmission of these messages; however, radio is the primary means.

b. The radio nets utilized in the field army are—

(1) A field army air request net, which provides communications between separate brigades, armored cavalry regiments, divisions, corps, and the field army tactical operations center. This net is used to submit and receive preplanned air support requests and to coordinate the execution of approved requests with ground operations. There are as many Army air request nets as there are corps in the field army. The stations have their terminals in the tactical operations center at each echelon. These stations are provided and operated by the supporting signal unit at each level. The station in the tactical operations center of the senior headquarters serves the net control station. The net can also be used to disseminate critical intelligence information.

(2) A military intelligence battalion, air reconnaissance support, operations net, which provides communications between the air force reconnaissance units, the battalion headquarters, and the field army and corps G2 air at the tactical operations center. This net is used to transmit imagery interpretation reports, pilot debrief reports, and other information to the field army and corps G2 air and the military intelligence battalion, air reconnaissance support, and allows the battalion and G2 air at field army and corps to pass information on immediate and preplanned requests directly to the detachments.

(3) A ground liaison officer operations net, which provides communications between liaison officers located with the tactical air force fighter units and the field army and corps G3 air in the tactical operations center. This net is used to transmit debrief reports and other information from the liaison officers to the G3 air and allows the G3 air to pass information on immediate and preplanned requests directly to the liaison officers.

(4) A corps aerial surveillance company operations net, which provides communications between the corps G2 air at the corps tactical operations center and the corps aerial surveillance company. This net is used to transmit imagery interpretation reports and debriefing reports from the aerial surveillance company to the G2 air and allows the G2 air to pass information on immediate and preplanned request directly to the aerial surveillance company.

(5) An airmobile division G2 air information net, which is to provide communications between the division G2 air, the aerial surveillance element, and the aviation group headquarters. Traffic over this net will include surveillance instructions

and intelligence information derived from air reconnaissance. The station at division is provided by the division signal battalion. This is a secure radio-teletype net.



CHAPTER 4

TACTICAL AIR SUPPORT OPERATIONS

(STANAG 2134 and 3277)

Section I. CLOSE AIR SUPPORT

4-1. General

Close air support is the air effort employed to harass, neutralize, or destroy enemy ground forces that are in close proximity to friendly land forces. Close air support missions are executed by aircraft of the other Services on Army request. They are used when army fire support means cannot fire on the target or when the added firepower of tactical fighter aircraft is necessary to obtain the results desired. Close air support strikes require detailed integration with the fire and movement of friendly surface elements. When approved, these strikes are planned, directed, and controlled by elements of the tactical air control system (TACS).

4-2. Types of Close Air Support Missions

a. The two types of air missions most commonly used to provide close air support in response to preplanned and immediate requests are airstrike and column cover. Air escort and landing zone preparation missions also are considered as close air support when used as described in *b* below.

(1) *Airstrike.* Airstrikes are missions executed by tactical fighter aircraft to engage enemy weapon positions, tanks, troops, vehicles, and other targets. Airstrikes are the most common close air support mission.

(2) *Column cover.* Column cover missions are flown to protect the ground movement of friendly forces from enemy attack. Tactical fighters are positioned over the column to perform visual reconnaissance to the front, rear, and flanks and to engage enemy air or ground elements that impede or threaten the progress of the column. Air Force forward air controllers (FAC) or qualified Army personnel, located in the forward part of the column, provide necessary coordination with the escorting aircraft.

b. When necessary, Army helicopters are provided a covering force of Air Force aircraft for

protection against enemy air and ground attacks and to neutralize enemy resistance in the objective or landing area. Forward air controllers accompany the covering force and assist in directing air action against hostile targets to, within, and from the target area.

4-3. Priorities

a. Priority I targets are those that are preventing or are immediately capable of preventing the execution of the plan of action; e.g., enemy mortar or artillery fire preventing movement of friendly troops or enemy columns moving up in sufficient force to penetrate friendly lines.

b. Priority II targets are those that are seriously interfering with the execution of the plan of action; e.g., a target that is delaying a friendly advance or is causing heavy casualties during the advance.

c. Priority III targets are those that are capable of ultimate serious interference with execution of the plan of action; e.g., a target that may be able to execute a counterattack against friendly forces during or after the advance.

d. Priority IV targets are those that are capable of only limited interference with the execution of the plan of action or influence thereon; e.g., enemy tactical units that are not inhibiting a friendly advance or enemy logistic units supporting engaged tactical units, and, by their nature, should be located and destroyed.

4-4. Close Air Support Request Procedures

a. General.

(1) The ground unit commander, with recommendations from his staff and the tactical air control party, determines which enemy targets are to be attacked by close air support.

(2) The ground unit commander requesting close air support is responsible for establishing

troop safety limits. He must specify the target, its priority, its location and description, the results desired, the desired time on target, and the latest time that the close air support can be used. Deviations from the desired time and "not-later-than" time must be approved by the unit originating the request.

(3) Requests for close air support can be initiated at any level of command. They may be either immediate or preplanned.

(4) Only ground force commanders or designated representatives can cancel or disapprove close air support requests. Members of the air element providing close air support act as advisers.

b. Request Form.

(1) Figure 4-1 illustrates a typical form used to request close air support. Standing operating procedures (SOP) prescribe the specific format, information to be entered, and the number of copies to be made.

CLASSIFICATION				
MISSION REQUEST ²	Line No.	REQUEST DATA ¹ (This line not transmitted)		
		1 UNIT CALLED <i>Ranger 3</i>	2 UNIT CALLING <i>Noble 6</i>	3 REQUEST NUMBER <i>1A073</i>
		4 REQUESTER PRIORITY <i>II</i>		
	5	TARGET DESCRIPTION AND LOCATION <i>3 Tanks in open field, grid coord 781510</i>		
	6	DESIRED RESULTS <i>Destroy</i>		
	7	DESIRED TIME OVER TARGET (TOT) AND LATEST ACCEPTABLE TOT <i>091610 MAR — 091610 MAR</i>		
	8	RECOMMENDED NUMBER AIRCRAFT AND WEAPON SYSTEM <i>(Furnished by TACP or FAC)</i>		
	9	LOCATION FRIENDLY POSITIONS AND MARKING METHOD <i>South of Highway 10, grid coord 779393 - Red smoke</i>		
	10	FINAL CONTROL PROCEDURE <i>(Furnished by TACP or FAC)</i>		
	11	INFLIGHT REPORTING PROCEDURE <i>(Furnished by TACP or FAC)</i>		
	12	REMARKS OR SPECIAL INSTRUCTIONS <i>Report results to FAC on inflight report net</i>		
	13	DATE/TIME SENT AND RECEIPT ACKNOWLEDGED <i>091505 MAR — 091509 MAR</i>		
	COORDINATION ³	14	ARTILLERY, AIR DEFENSE AND NAVAL GUNFIRE COORDINATION (Initials) <i>BMD, AD NGF not required</i>	
15		RESTRICTIVE FIRE PLAN INSTRUCTIONS <i>No fires south of Highway 10, or west of BLUE RIVER</i>		
16		APPROVAL AND MISSION NUMBER OR DISAPPROVAL <i>HEP 09-21 (1A325)</i>		
17		DATE/TIME REQUESTER NOTIFIED <i>091535 MAR</i>		
CLASSIFICATION				

¹Information to be included determined from unit SOP. Information shown is for example only.

²Mission request section is used by requester to insure completeness and provide a record of request.

³Coordination section is used by TASE/FSE/ACE/SACC for processing, coordination, and recording commander's decision.

Figure 4-1. Typical close air support request form.

(2) A request form is completed for each close air support mission requested. The form serves as a guide to insure that all required information is transmitted to supporting agencies. The completed form is retained as a record of the request.

c. Preplanned Close Air Support Requests.

(1) Allocated close air support effort should be used for preplanned strikes to the maximum possible. Ordnance and aircraft can be matched to the target; mission planning can be more complete; and missions can be better integrated into tactical operations.

(2) Requests for preplanned close air support are submitted through the fire support coordination centers at battalion and brigade and the tactical operations centers at division, corps, and field army. Field army makes final approval and forwards the requests to the tactical air control center as a close air support requirement. The tactical air control center orders the mission flown by one of its tactical fighter units.

(3) No special communications are required for handling preplanned air requests between battalion, brigade, and division. Communications means used include command, operations, and common user systems. From division and up, however, due to the volume of traffic and need for responsiveness, the army air request net is provided for planning and coordinating preplanned tactical air support.

d. Immediate Close Air Support Requests.

(1) Immediate close air support missions are flown from sorties set aside from the daily allocation for his purpose or, if these are exhausted, by diverting preplanned sorties. They are used against targets of opportunity and in operations where targets are not identified in sufficient time to permit detailed planning. When possible, ordnance and aircraft are selected according to the target to be attacked. Frequently, however, whatever ordnance and aircraft are most readily available must be used. Therefore, airstrikes conducted in response to immediate requests may not be as effective as preplanned airstrikes and should be kept to a minimum.

(2) Requests for immediate close air support are submitted through the air request net operated by the tactical air control party. Requests are forwarded directly from the originating echelon to the direct air support center collocated with the

corps tactical operations center. The direct air support center immediately begins planning for the execution of the mission. When the request is approved by the corps tactical air support element, the direct air support center orders the mission flown.

(3) Figure 4-2 illustrates immediate close air support channels.

4-5. Target Location and Aircraft Control

a. Normal Procedure.

(1) Once launched, preplanned and immediate close air support missions are controlled in the same manner. A control and reporting center (CRC), a control and reporting post (CRP), or a forward air control post (FACP) directs the fighter aircraft to a designated point where control is passed to the forward air controller (FAC). Methods used by the forward air controller to direct the fighter pilot may include the use of marking by ordnance, the path of another aircraft, smoke or other ordnance fired from surface weapons, ground-marking panels, terrain reference, or a combination of these means. When the forward air controller desires the Army to mark a close air support target with field artillery, he requests this support through the associated tactical operations center.

(2) If necessary to control strike aircraft and assist the pilots in locating the target, the forward air controller may operate from an aircraft. In situations where the normal control means of the tactical air control system are too far removed from an operation to perform adequate planning and close control, as in the initial stages of airborne and amphibious operations, an airborne direct air support center (DASC) or a tactical coordinator (airborne) (TAC(A)) or both may be used. These elements work in conjunction with forward air controllers accompanying the forward units of the Army.

(3) While departing the target area, the pilot makes damage assessment (in-flight) reports to the forward air controller and other designated Air Force control facilities. These reports are passed to the Army by the appropriate air liaison officer or tactical air control party, to provide immediate information on the mission results.

(4) During conditions of reduced visibility or in the absence of a forward air controller, an air

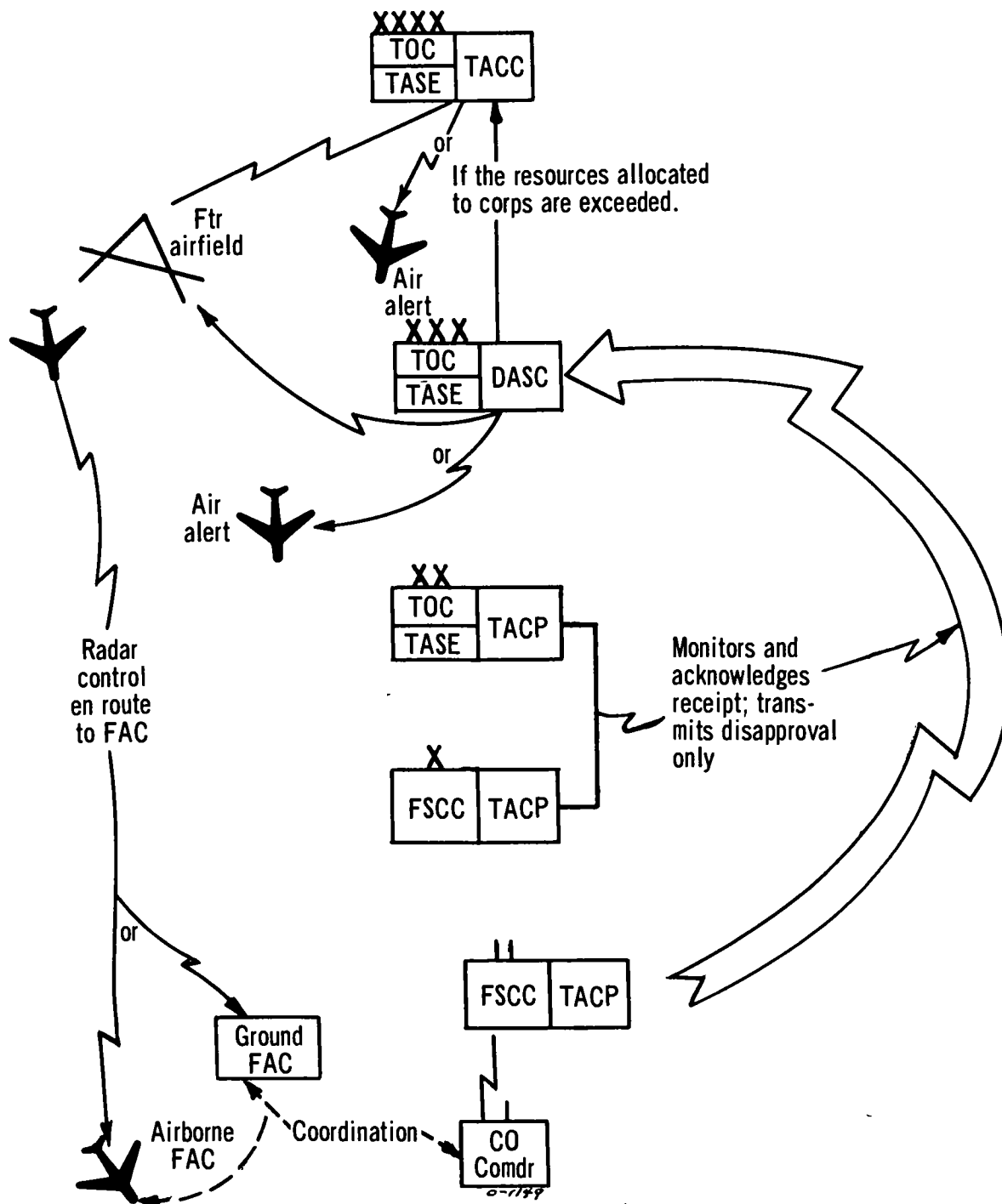


Figure 4-2. Immediate close air support request channels.

support radar team (ASRT) can accomplish the functions normally assigned to the forward air controller.

b. Emergency Procedures. When a forward air controller is not available to direct a close air support strike, Army personnel may direct the strike. Procedures to be followed are as follows:

(1) A field artillery or mortar forward observer may mark or otherwise identify the target for the attacking aircraft. The forward observer requires notification in time to position himself for the mission. If the forward observer has access to air-ground communications, the direct air support center or a tactical air control party

briefs the fighter aircraft pilot on the target and instructs him to contact the forward observer for further assistance. When contacted by the pilot, the forward observer identifies the target by map grid coordinates, and necessary safety information about friendly forces and generally follows the same procedures as the forward air controller. the forward observer identifies the target by map or terrain references or marks the target with artillery or mortar projectiles.

(2) When the forward observer has no air-ground communications, he establishes contact by ground communications with the appropriate tactical air control party or direct air support center fighter duty officer. The tactical air control party or the direct air support center relays the forward observer's information to the fighter aircraft.

(3) If a forward observer is not available, other qualified individuals may be used to assist in locating the target for a close air support mission.

Section II. TACTICAL AIR RECONNAISSANCE

4-6. General

a. A primary function tactical air reconnaissance is to extend the ground reconnaissance capability and to support the integrated intelligence operations of the Army.

b. Tactical air reconnaissance missions in support of the Army may be executed by the Navy or the Marine Corps; the Air Force, however, provides the largest portion of the total effort required. The theater commander establishes policies and priorities for employment of these resources.

c. Tactical air reconnaissance missions vary from artillery adjustment and battlefield surveillance by visual means to the use of complex sensory equipment for acquiring intelligence information during day and night operations and under all weather conditions. The coordination and integration of tactical air reconnaissance with ground operations is accomplished through the facilities of the tactical air control system and the Army air-ground system.

4-7. Types of Air Reconnaissance

a. *Visual.* Visual reconnaissance consists of area search, specific search, route reconnaissance, and weapon fire adjustment.

b. *Imagery.* Both optical and nonoptical imagery is available.

(1) *Optical imagery.* Optical imagery is available in black and white, color, and a variety of other modes.

(2) *Nonoptical imagery.* The two principal types of non-optical imagery are infrared and airborne radar. Nonoptical imagery may be used in combination with other types of reconnaissance or during periods in which visual and optical imagery are not feasible.

c. *Electronic Warfare Reconnaissance.* Tactical electronic warfare reconnaissance is used for maintaining electronic order of battle, locating high-threat emitters and associated weapon systems, selecting and determining the effectiveness of electronic countermeasure tactics, and executing electronic warfare countermeasures.

d. *Weather Reconnaissance.* Weather data are obtained from visual observations and airborne weather instrument readings. These data are used to update weather forecasts and as aids in making operational decisions.

4-8. Priorities

a. Priority I is used for surveillance of enemy units or activities that are preventing or are immediately capable of preventing the accomplishment of the friendly force mission.

b. Priority II is surveillance of enemy units or activities that are seriously interfering with the friendly force mission and the surveillance required in the conduct of current tactical operations.

c. Priority III is surveillance of enemy units or activities capable of ultimate serious interference with the mission and the surveillance required to support planned future operations.

d. Priority IV is surveillance of enemy units or activities capable of limited interference with the mission and the surveillance required for administrative and logistic purposes.

4-9. Tactical Air Reconnaissance Request Procedures

a. General.

(1) Requests for tactical air reconnaissance may be initiated at any level of command. Re-

quests may be for immediate missions or preplanned missions in support of future operations.

(2) The Army commander at each echelon, with advice from his staff, determines which intelligence requirements of his command will be fulfilled by tactical air reconnaissance. Army commands above the requesting echelon may substitute another collection means.

(3) The commander requesting tactical air reconnaissance states the location of the target or area; the results desired; the specific element of intelligence information required; and, when imagery is requested, whether prior coverage is acceptable. Results desired are expressed in terms of reports, imagery, scale, and so on. If prior coverage is acceptable, the earliest usable prior coverage is indicated.

(4) Care must be exercised to insure that requests are initiated sufficiently in advance of the time that the information is required to allow for collection, processing, evaluation, and interpretation. The advance time required varies between commands according to organization, location and procedure and is established by local standing operating procedures.

(5) Only Army commanders or designated representatives may cancel or disapprove tactical air reconnaissance requests. Members of the air element providing air reconnaissance support act only as advisers.

(6) Requests may express a requirement for one-time, continuous, or repetitive coverage.

(7) Requests that originate in the joint force headquarters are submitted directly to the air component commander for action. These requests are consolidated with those of the Service components that have been approved in accordance with the guidance and priorities of the joint force commander.

b. Request Form.

(1) Figure 4-3 illustrates a typical form used to request tactical air reconnaissance. Standing operating procedures prescribe the specific format, information to be entered, and the number of copies to be made.

(2) A request form is completed for each tactical air reconnaissance target requested. The form serves as a guide to insure that all required information is transmitted to supporting agencies. The completed form is retained as a record of the request.

c. Preplanned Tactical Air Reconnaissance Requests.

(1) A preplanned mission is the most efficient and economical type of mission because it allows sufficient time for coordination, planning, briefing, and consolidation of requirements. It also permits proper selection and allocation of aircraft and sensors and eliminates the wasting of capabilities by insuring that all available resources are programmed for specific mission accomplishment. The proper interpretation, integration, and dissemination of the information gathered can also be programmed into the total work effort. Preplanned air reconnaissance requests are forwarded over the Army air request net from division and up, and through intelligence channels below division.

(2) Requests are examined by intelligence personnel at each echelon to verify that the information is not already available and to insure that requests comply with the objectives of the intelligence plan established by the commander. Each echelon approves or disapproves preplanned requests submitted by subordinate units. The request originator is advised of a disapproval and is given the reason therefor.

(3) The field army G2 air furnishes detailed information concerning preplanned requests to the air reconnaissance liaison officer at the Air Force tactical air reconnaissance unit to use in briefing and debriefing aircrews. He also notifies the operations and intelligence section of the military intelligence battalion, air reconnaissance support (MI-BARS). The functions of the air reconnaissance liaison officer and military intelligence battalion, air reconnaissance support, are described in FM 30-20.

(4) Figure 4-4 illustrates preplanned and immediate tactical air reconnaissance request channels.

d. Immediate Tactical Air Reconnaissance Requests.

(1) Immediate tactical air reconnaissance requests are characterized by the urgency of time involved between the request for information and its reception. These requests are generated by unforeseen intelligence requirements of immediate tactical value. A portion of each day's tactical air reconnaissance resources is set aside to meet these contingencies since they usually cannot be avoided.

(2) Requests for immediate tactical air reconnaissance are submitted identically as requests

CLASSIFICATION				
REQUEST DATA ¹ (This line not transmitted)				
1 UNIT CALLED <i>Ranger 2</i>		2 UNIT CALLING <i>Noble 6</i>		3 REQUEST NUMBER <i>2 A 017</i>
4 REQUESTER PRIORITY <i>II</i>				
MISSION REQUEST ²	5 TARGET, DESCRIPTION, LOCATION, AND MAP REFERENCES <i>Suspected tank battalion deployed 150 meters north of Highway 10, grid coord 757503 to 781510, AMSI 851, Sheet IV CENTERVILLE</i>			
	6 DESIRED RESULTS AND EEI <i>Enemy disposition north of Highway 10. EEI: What is strength and disposition of enemy armor in target area.</i>			
	7 DESIRED TIME OVER TARGET (TOT) AND LATEST ACCEPTABLE TOT <i>090800 MAR — 091200 MAR</i>			
	8 IMAGERY, PRINTS, AND REPORTS REQUIRED (Include scale) <i>Vertical BW photos 1:10,000. Request inflight report of visual observation</i>			
	9 ACCEPTABILITY OF PRIOR COVERAGE (PCA) <i>Not acceptable</i>			
	10 LATEST ACCEPTABLE DELIVERY DATE/TIME AND DELIVERY ADDRESS <i>091530 MAR — G 2, 20th Inf</i>			
	11 INFLIGHT REPORTING PROCEDURE <i>(Furnished by TACP or G2 air)</i>			
	12 REMARKS OR SPECIAL INSTRUCTIONS <i>Recommend east to west flight path</i>			
	13 DATE/TIME SENT AND RECEIPT ACKNOWLEDGED <i>090130 MAR — 090145 MAR</i>			
	COORDINATION ³	14 ARTILLERY, AIR DEFENSE AND NAVAL GUNFIRE COORDINATION (Initials) <i>BMG AD NGF not required</i>		
15 RESTRICTIVE FIRE PLAN INSTRUCTIONS <i>None</i>				
16 APPROVAL AND MISSION NUMBER OR DISAPPROVAL <i>HEK 09-06 (2A017)</i>				
17 DATE/TIME REQUESTER NOTIFIED <i>090310 MAR</i>		MIBARS NOTIFIED <i>090310 MAR</i>		
CLASSIFICATION				

¹Specific information to be included determined from SOP. Information shown is for example only.

²Mission request section is used by requester to insure completeness and provide a record of the request.

³Coordination section is used by the TASE/FSE/ACE/SACC for processing, coordination, and recording the commander's decision.

Figure 4-3. Typical air reconnaissance request form.

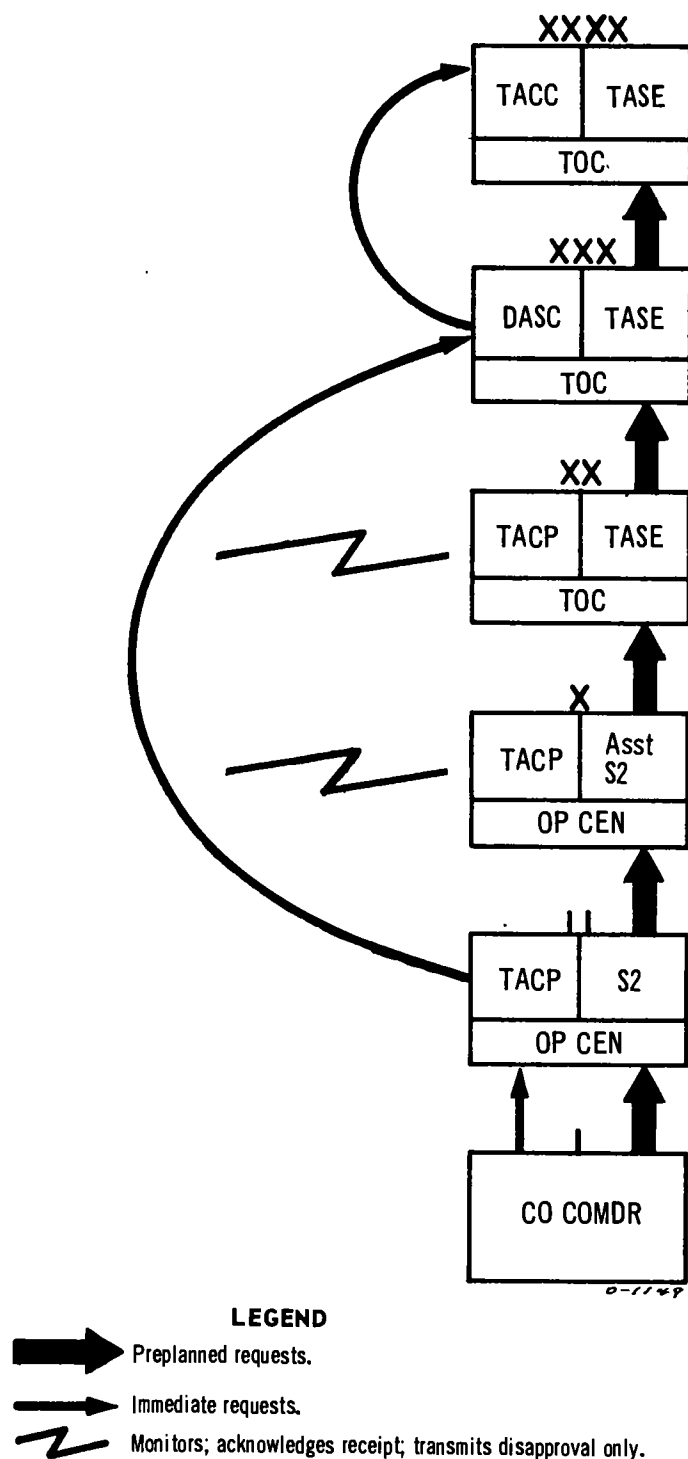
for immediate close air support. Figure 4-4 illustrates immediate tactical air reconnaissance request channels.

(3) If all resources have been committed and additional requirements arise, these requirements may be satisfied by assigning additional missions to airborne aircraft, diverting aircraft from other missions, or by scrambling aircraft programed for preplanned missions of lesser priority. The appropriate ground force commander or a design-

nated representative determines whether a previously planned or immediate mission will be diverted.

4-10. Target Location and Aircraft Control

Reconnaissance aircraft do not deliver ordnance and, therefore, require less control than close air support aircraft. However, the air control facilities used for close air support aircraft are useful in aiding the air reconnaissance pilot to locate his



NOTE: Each request, preplanned or immediate, is examined to determine whether it is within the capability of Army aircraft. If it is and the request is approved, the G2 at the lowest echelon possessing the required capability tasks an appropriate Army aviation unit to execute the mission. Approval/disapproval is transmitted on the same net that the request is initiated on. When request is approved, mission data accompanies the approval.

Figure 4-4. Air reconnaissance request channels.

target and they should be employed. Air reconnaissance aircraft use photoflash cartridges to insure proper functioning of the sensor systems. The debris resulting from the use of this equipment can cause injury to friendly troops and equipment and should not be discharged over friendly positions.

4-11. Reporting and Dissemination

a. The value of information is increased by its expeditious distribution in usable form to interested agencies. When real-time data link or in-flight processing is not used, imagery or other collected data are processed immediately after the aircraft lands. Interpretation follows immediately, and reports are made. When processing Army requested photography, the Air Force processing facility provides a duplicate negative and two prints of each photograph to the military intelligence battalion, air reconnaissance support, for Army reproduction and detailed analysis.

b. In-flight reports normally are made to designated elements of the tactical air control system and the Army air-ground system for relay to requesters and interested agencies. These reports consist of significant visual sightings observed during the flight.

c. Immediately after landing, the aircrew makes a debriefing report including a complete summary of the mission. The air reconnaissance liaison officer normally participates in this debriefing. He immediately forwards intelligence information derived to the MIBARS and the G2 air at field army and corps who pass it to the requester and other appropriate agencies.

d. Electronic reconnaissance reports are made either by the aircrew or by automatic equipment to a ground station as soon as valid information is collected. As soon as possible after the aircraft lands, the aircrew makes an immediate report; a final report is submitted when complete mission results are available.

e. Weather reconnaissance reports are made while in flight either by the aircrew or by automatic equipment. At aircrew debriefings, a weather officer assists in preparing a weather summary report, which is forwarded to the tactical air control center. The tactical air control center disseminates the weather summary report to higher, adjacent, and subordinate headquarters.

f. FM 30-5 and FM 30-20 contain detailed information on air reconnaissance reporting and dissemination procedures.

Section III. TACTICAL AIRLIFT

4-12. General

a. Tactical airlift is the movement of personnel and material by tactical air force aircraft. The Army uses tactical airlift to increase the mobility of its ground combat forces and to provide rapid delivery of supplies and equipment from theater source to user.

b. The apportionment of tactical airlift resources is the responsibility of the theater commander; however, the Army component commander specifies how the sorties allocated to him will be used. Based on recommendations of the Army and Air Force component commanders, the theater commander makes adjustments to meet unforeseen requirements.

4-13. Categories of Tactical Airlift

Tactical airlift resources allocated to the Army are categorized as combat support or combat service support according to the mission of the ground force supported.

a. Combat support airlift is the air movement of combat personnel or cargo that has a direct and immediate effect on the accomplishment of a tactical mission; e.g., reinforcement of troops in contact, emergency resupply of troops in contact, or the movement of troops and equipment with an immediate tactical mission to be executed on arrival at the destination.

b. Combat service support airlift is the air movement of personnel or cargo to support combat or combat support elements in accomplishing the tactical mission, e.g., the movement of replacements, movements of supplies in normal supply channels, or aeromedical evacuation of patients. Most tactical airlift operations are in this category.

4-14. Types of Air Movements

Air movements may be either tactical or administrative depending on the conditions of the move.

a. A tactical movement emphasizes movement of troops and cargo in combat-ready formations.

Tactical movements assume that contact with the enemy may occur either on arrival or shortly after arrival at the destination. Under these conditions, efficient use of aircraft cargo space frequently is sacrificed for tactical considerations. The G3 (S3) is responsible for general staff supervision of tactical movements. Tactical air movements utilize combat support airlift.

b. An administrative movement emphasizes efficient use of aircraft cargo space. Such moves

assume that contact with the enemy is remote or improbable on arrival at the destination. The G4 (S4) is responsible for general staff supervision of administrative movements. Administrative air movements utilize combat service support airlift.

4-15. Tactical Airlift Priorities

a. Priority I is used in an emergency that requires the utmost speed in airlifting personnel or

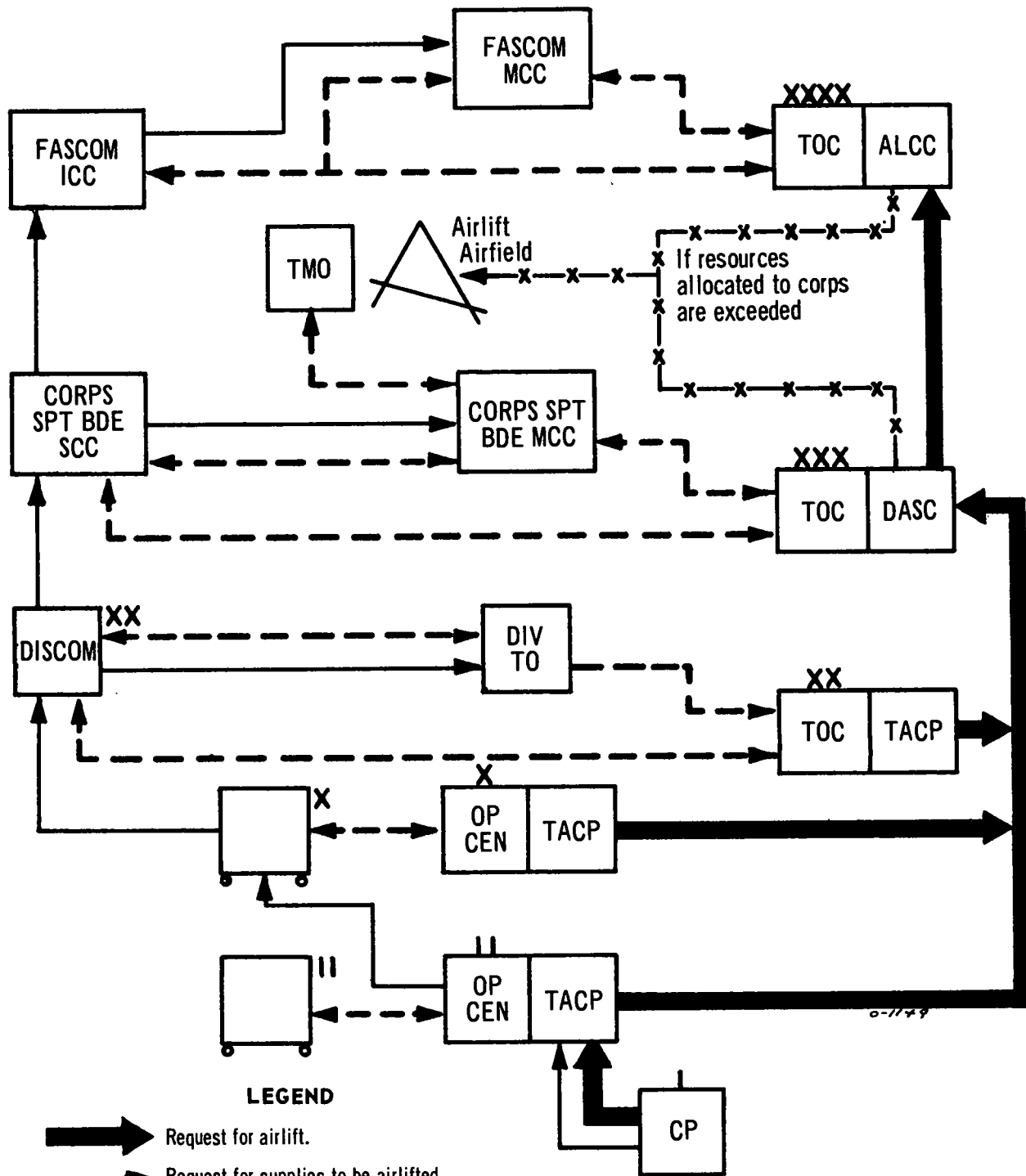
CLASSIFICATION					
MISSION REQUEST 2	REQUEST DATA ¹				
	1 UNIT CALLED <i>Ranger 3</i>	2 UNIT CALLING <i>Noble 4</i>	3 REQUEST NUMBER <i>3 A008</i>	4 REQUESTER PRIORITY <i>II</i>	
	5 CARGO DESCRIPTION AND LOCATION ³ each <i>105 mm how. wt 4780 lbs.</i>				
	6 DESTINATION, DATE/TIME REQUIRED AT DESTINATION, AND RECEIVING ORGANIZATION <i>Fri base Delta, 091200 MAR, 1st Bn, 320 Arty</i>				
	7 DATE/TIME AVAILABLE FOR AIRLIFT <i>081600 MAR</i>				
	8 RECOMMENDED NUMBER, TYPE OF AIRCRAFT, AND DELIVERY SYSTEM <i>One C-130, Airland (Furnished by TACP)</i>				
	9 LOCATION OF LZ OR DZ AND METHOD OF MARKING <i>9th Div. field strip, coord 781516, white, panels, white smoke</i>				
	10 FINAL CONTROL PROCEDURE <i>(Furnished by TACP)</i>				
	11 INFLIGHT REPORTING PROCEDURE <i>(Furnished by TACP)</i>				
	12 REMARKS, SPECIAL INSTRUCTIONS OR SPECIAL EQUIPMENT REQUIRED <i>Alternate LZ located coord 612019 Contact enemy, SA fire on approach and take-off</i>				
	13 DATE/TIME SENT AND RECEIPT ACKNOWLEDGED <i>081340 MAR - 081615 MAR</i>				
	COORDINATION 3	14 ARTILLERY, AIR DEFENSE AND NAVAL GUNFIRE COORDINATION (Initials) <i>BMD 20 NG F not required</i>			
		15 RESTRICTIVE FIRE PLAN INSTRUCTIONS <i>Cast 9th Div. field strip</i>			
16 APPROVAL AND MISSION NUMBER OR DISAPPROVAL <i>HR 09-14 (3A008)</i>					
17 DATE/TIME REQUESTER NOTIFIED <i>082115 MAR</i>					
CLASSIFICATION					

¹Information to be included determined from SOP. Information shown is for example only.

²Mission request section is used by requester to insure completeness and provide a record of request.

³Coordination section is used by TASE/FSE/ACE/SACC for processing coordination and recording commander's decision.

Figure 4-5. Typical airlift request form.



NOTE: Requests are satisfied at the lowest echelon capable of fulfilling the requester's needs.

Figure 4-6. Combat airlift request channels.

equipment needed in the immediate battle situation to preclude defeat of friendly forces.

b. Priority II is used for the airlift of personnel or equipment that is needed to insure successful accomplishment of the immediate tactical objective.

c. Priority III is used for the airlift of personnel or equipment for employment or use in planned future operations.

d. Priority IV is used for the routine airlift of personnel and equipment.

4-16. Tactical Airlift Request Procedures

a. General.

(1) Overall command of tactical airlift forces is exercised by the Air Force component commander through the tactical air control center. An airlift force commander is designated to control all tactical airlift resources assigned to the air component. Detailed planning and coordination of airlift activities are accomplished through the airlift control center at the command post of the designated airlift force commander.

(2) Tactical airlift allocated to the Army is specified in one of three ways:

(a) A number of sorties by type of aircraft.

(b) A gross tonnage airlift capability.

(c) A combination of the above.

(3) Movements by tactical airlift allocated to the Army is managed by the field army support command (FASCOM) movement control center at field army, the corps support brigade movement control center at corps, and the division support command (DISCOM) transportation movements office at division. In addition, field army and corps movement control centers position transportation movement officers at critical tactical airlift points throughout the field army and corps areas to assist in regulating the movement of personnel and cargo through these points.

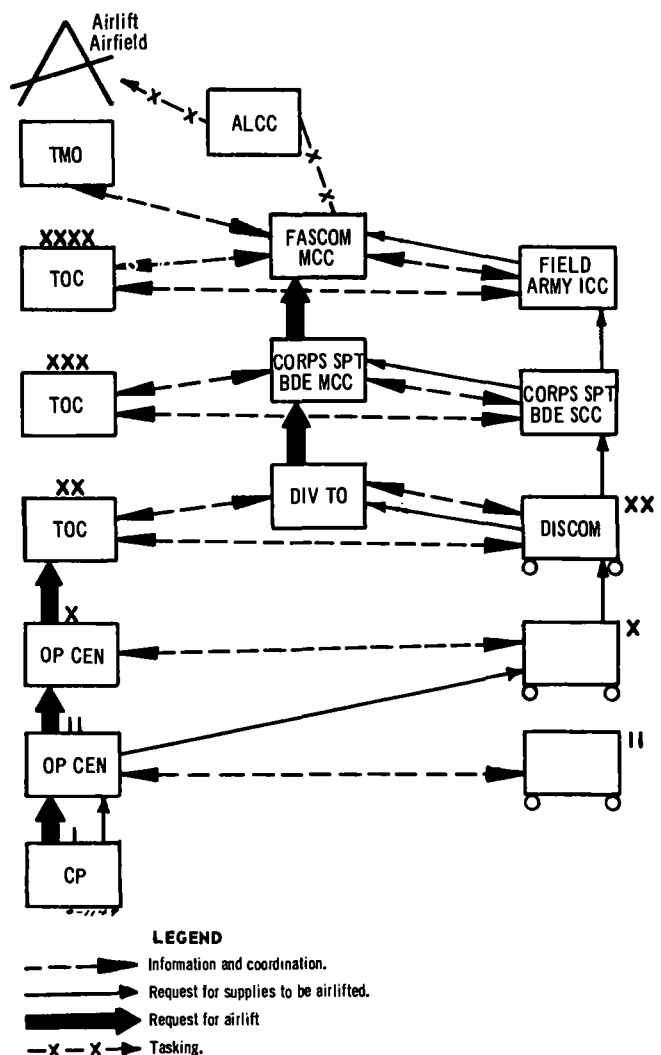
(4) Requests for tactical airlift may originate at any command echelon. The tactical operations centers at field army, corps, and division approve requirements for tactical airlift to support combat operations and submit them to their supporting movement control center or transportation movements office. Only the supported Army commander may disapprove a request. Members of the move-

ment control center and the Air Force component act only as managers and advisers.

(5) A portion of available tactical airlift resources is allocated to the direct air support center for short-haul airlift and immediate (emergency) requests. These resources may be committed directly by the direct air support center. If immediate requirements exceed resources, the direct air support center requests additional support from the supporting airlift control center.

b. Request Form.

(1) Figure 4-5 illustrates a typical airlift request form. Standing operating procedures prescribe the specific format, information to be entered, and the number of copies to be made.



NOTE: Requests are satisfied at the lowest echelon capable of fulfilling the requester's needs.

Figure 4-7. Combat service support airlift request channels.

(2) A request form is completed for each tactical airlift mission requested. The form serves as a guide to insure that all required information is transmitted to the supporting agency. The completed form is retained as a record of the requests.

c. Combat Support Airlift Requests.

(1) Preplanned requests for combat support airlift are processed through operations channels to the echelon having authority to forward the request to the airlift control center for execution. Normally, this will be the echelon that has been allocated sufficient tactical airlift capability to fulfill the request. At each level, the request is coordinated with the transportation movements office or movement control center. The echelon having approval authority forwards approved requirements to the airlift control center and coordinates the execution of the mission.

(2) Immediate requests for combat support airlift are processed through the same channels and in the same manner as close air support except that the transportation officer is included in the coordination and validation procedure at each echelon. Coordination of immediate missions that are approved and ordered executed is accomplished by transportation movements officers the same as preplanned combat support airlift missions.

(3) Figure 4-6 illustrates request channels for combat support airlift.

d. Combat Service Support Airlift Requests.

(1) Preplanned requests for combat service support airlift are processed through operations channels at battalion and brigade. From this point, they are processed in logistic channels through the transportation movements office at division and the movement control centers at corps support brigade and field army support command. At each echelon, they are coordinated with the tactical operations center. The lowest echelon having the allocated capability or the approving authority forwards the requirement to the airlift control center for execution.

(2) Request procedures for immediate combat service support airlift are the same as for immediate combat support airlift.

(3) Figure 4-7 illustrates request channels for combat service support airlift.

e. FM 100-27 contains additional information on tactical airlift procedure including attachment of airlift forces to Army organizations; movement of personnel, equipment, and supplies by theater army commands; and the logistic organization for the conduct of tactical airlift operations.



CHAPTER 5

ARMY AVIATION SUPPORT OPERATIONS

Section I. DIRECT AERIAL FIRE SUPPORT

5-1. General

a. Direct aerial fire support is the fire delivered against surface targets in support of ground combat operations by armed helicopters organic to Army aerial fighting units. Direct aerial fire support is integrated with ground operations in the same manner as other supporting fires.

b. The principal source of direct aerial fire support is the aerial field artillery battalion. This battalion is organic to the airmobile division or is organized as a separate unit for attachment at corps and field army.

c. Additional direct aerial fire support is available from the attack helicopters assigned to air cavalry squadrons and to assault helicopter units. However, such employment should be considered only when other fires are not available and when it does not divert these aircraft from their primary mission. Normal employment and control procedures for these aircraft are contained in FM 1-100 and FM 17-36.

5-2. Direct Aerial Fire Support Missions

a. Aerial field artillery firing batteries can assume any tactical artillery mission; however, when placed in direct support, the unit must be augmented or must perform the mission for a limited period. These units are ideally structured for reinforcing, general support, and general support-reinforcing missions. Aerial field artillery units can be employed against the entire spectrum of artillery targets.

b. Because the weapons and communications systems are similar, other aerial fighting units can be employed to augment, reinforce, or temporarily substitute for aerial field artillery.

5-3. Capabilities

Aerial fighting units may be used to support maneuver forces when surface field artillery is out of range or in the process of displacement. These

units are particularly effective in providing column cover for movements or for employment over difficult terrain inaccessible to surface field artillery units. During airmobile operations, aerial fighting units may be used for preparation fires and in securing initial air assault objectives. Aerial fighting units can provide support for holding forces and protection for covering forces, to include aerial antitank fires. Because of its mobility and flexibility, direct aerial fire support is suitable for employment in both the area and the mobile defense.

5-4. Direct Aerial Fire Support Request Procedures

a. *Fire Support Coordination.* Proper fire support coordination insures more effective fire support, achieves integration of all supporting fires into the scheme of maneuver, and avoids duplication of effort. The fire support coordinator (FSCOORD) is charged with the responsibility for coordination of all fires delivered on surface targets, including aerial field artillery fires. To accomplish the fire support coordination mission, the fire support coordinator at each echelon establishes and operates a fire support coordination agency. Personnel to operate the fire support coordination agency at each level are provided by the supporting field artillery unit.

b. *Immediate Direct Aerial Fire Support Requests.* Requests for immediate direct aerial fires may be originated by a company commander through his forward observer or by the maneuver battalion or brigade commander through his artillery liaison officer. The fire request is transmitted directly from the originating agency to the fire direction center at the field artillery battalion in direct support of the brigade. At the fire direction center, the fire request is evaluated to determine whether the target can be more effectively attacked by other weapon systems. If aerial field artillery is deemed most appropriate, the request is forwarded to the division fire direction center.

Here similar considerations and decisions are made. If the decision is to provide aerial field artillery, the fire order is sent to the supporting aerial field artillery battalion. If suitable aerial field artillery means are not available at division, the fire direction center transmits the fire request to corps where it is approved and ordered executed or is disapproved. Response times for fire missions conducted by an aerial field artillery battery can be reduced by assigning it a mission of reinforcing the direct support battalion with the brigade. The direct support battalion can then assign fire missions to the aerial field artillery battery without passing through another headquarters or fire direction center. The higher headquarters maintains control by monitoring the missions.

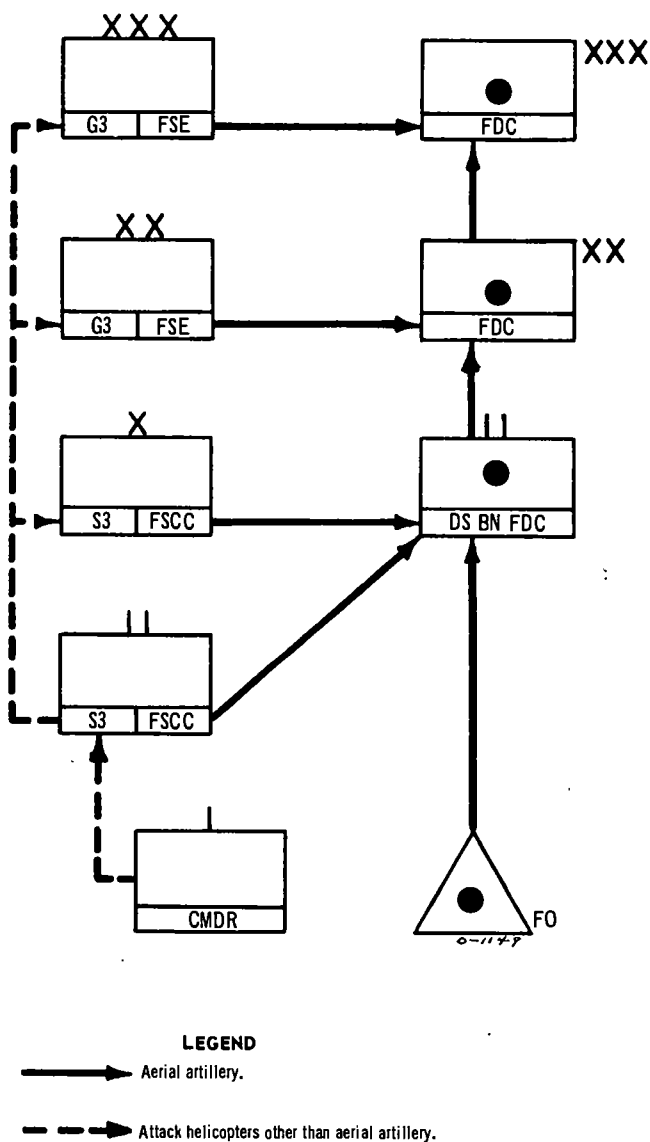


Figure 5-1. Immediate direct aerial fire support request channels.

Figure 5-1 illustrates the normal channels for immediate request of direct aerial fire support.

c. Preplanned Direct Aerial Fire Support. Preplanned direct aerial fire support follows normal field artillery planning channels. Forward observers submit the supported unit commanders' proposed target list to the field artillery liaison officer at the maneuver battalion. The liaison officer resolves duplication and integrates the target list into the battalion commander's scheme of maneuver. The request is then submitted in the form of a field artillery fire plan to the direct support field artillery battalion. At the direct support battalion, recommendations and priorities from each maneuver battalion are considered and the brigade fire plan is developed. Similar planning is accomplished at each higher echelon until the requested fire is allocated or denied. Figure 5-2 il-

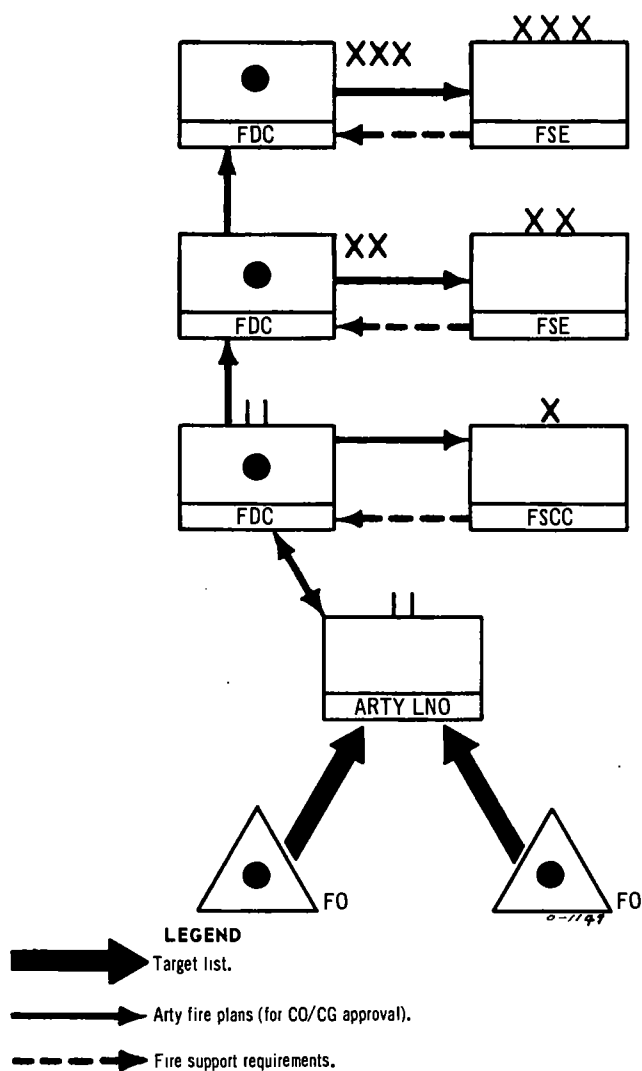


Figure 5-2. Direct aerial fire support planning channels.

illustrates planning channels for direct aerial fire support.

d. Direct Aerial Fire Support by Air Cavalry and Air Escort Aircraft. When the tactical situation warrants and the force commander deems necessary, attack helicopters assigned to cavalry squadrons or assault helicopter battalions may be employed in a direct aerial fire support role. Requests for these aircraft will be processed through command or operational channels. During the actual target engagement, the supported commander has responsibility for the fires of these attack helicopters. Under most circumstances, he will designate the field artillery forward observer with the unit as the fire control agent. However, any method of fire control that the supported unit commander deems appropriate for a given situation is acceptable.

5-5. Target Location and Aircraft Control

a. The unit requesting direct aerial fire support submits coordination data such as target description and location, location of friendly forces, method of target identification, information on the tactical situation, and radio contact frequencies. These data are passed to each fire support coordination agency processing the request, to the unit

tasked to execute the fire mission, and to the flight leader of the aircraft designated to attack the target.

b. When the flight leader receives the fire order, he effects direct coordination with the agency initiating the fire request—usually the forward observer or the field artillery liaison officer. The forward observer will provide the flight leader with the latest information on the target and friendly situation, and he may suggest a direction of attack. A critical task of the forward observer is accurate marking of friendly troop locations. Techniques of target designation and control include verbal target description by aerial or ground observers; marking the target by tracers, smoke grenades or rockets; vectoring of attacking helicopters by radio communications using checkpoints, grid coordinates, or prominent terrain features; and radar control of the aircraft by ground-based radar.

c. Attack of the target is continued until the target is destroyed, the attack is terminated by the forward observer or fire direction center, or all ammunition is expended. On completion of the mission, the aircrew passes in-flight damage assessment and intelligence reports to the appropriate agencies.

Section II. ARMY AERIAL RECONNAISSANCE AND SURVEILLANCE

5-6. General

a. Army aerial reconnaissance and surveillance is the gathering of combat intelligence information by Army aviation units to support Army tactical operations. Since Army aviation units are immediately responsive to Army commanders, the use of Army aircraft is considered for each mission within the units' capability before passing the mission to another Service for execution. Both helicopters and fixed-wing aircraft are used.

b. The air cavalry and other aviation units of the division, corps, and field army are used to execute visual aerial reconnaissance and surveillance missions. The aerial surveillance company at corps and the aerial surveillance platoon in the airmobile division provide permanent imagery from photographic, radar, and infrared sensors.

5-7. Characteristics of Army Aerial Reconnaissance and Surveillance

a. Aerial reconnaissance missions are directed toward a specific target without a requirement for

continuous coverage. Reconnaissance missions are developed from specific information indicating that an area may be of intelligence value or to support a current or planned operation. Reconnaissance targets beyond the forward edge of the battle area (FEBA) may require penetration of enemy airspace when adequate coverage cannot be obtained by conducting the mission in the stand-off mode.

b. Aerial surveillance missions are characterized by frequent flights over large areas of terrain. Generally they are conducted without regard to specific targets although major areas of interest may be emphasized. A large area coverage sensor, such as radar, or visual observation is usually employed for aerial surveillance. Aerial surveillance allows coverage of a large area rapidly and continuously, with a minimum expenditure of aircraft and sensor capabilities. These missions allow observation of movement or changes as they take place on the enemy side of the forward edge of the battle area which may provide the commander

early warning of possible enemy intentions and may identify specific target areas.

5-8. Aerial Collection Methods

a. Visual Observation. Visual aerial surveillance and reconnaissance provides the most rapid means of collecting selected types of intelligence information through observation from an aircraft. General types of visual aerial surveillance and reconnaissance are area search, specific search, and route reconnaissance.

b. Photography. Aerial photography is classified according to camera position, the area coverage, and mode. Camera positions include vertical, oblique, and panoramic photography. Area of coverage includes pinpoint, strip, and area. Modes include black and white and color.

c. Infrared Imagery. Infrared imagery is the detection of thermal radiation from the terrain and objects on the terrain. An infrared system must operate at low altitudes and is limited to the area directly below the flight path of the aircraft. It is normally used for point, linear, or small area targets. Immediate in-flight returns from infrared imagery can be provided to requesting units through ground sensor terminals and by in-flight reading of the display on the observer's console.

d. Radar Imagery. Side looking aerial radar (SLAR) is an active electronic device that emits energy and senses that portion of the emitted energy that is returned by reflection off terrain and objects on the terrain. The energy is directed below and to each flank of the aircraft flight path. Side looking aerial radar produces two images on strips of film simultaneously. It depicts fixed target information, such as terrain features and buildings, and moving-target information. It also can provide immediate in-flight returns through ground sensor terminals and from in-flight reading of the display on the observer's console.

5-9. Army Aerial Reconnaissance and Surveillance Request Procedures

a. Preplanned Requests.

(1) The initiation, processing, and implementation of preplanned requests are basically the same at all levels. Collection plans are developed through careful planning and consideration at each echelon before being submitted to the next higher headquarters. They represent the total known needs of the command as of the time of their submission.

(2) Preplanned Army aerial reconnaissance and surveillance requests are submitted through S2/G2 air channels. At any echelon, the request may be approved or disapproved or another method of obtaining the required information may be substituted. The requesting unit is notified of disapproval or substitution with the reasons therefor.

(3) At each level, when a request for aerial reconnaissance or surveillance is approved, it is integrated into the overall collection plan of that echelon. Army aircraft are considered for all missions that fall within their capabilities, including aircraft from supporting artillery and combat support elements when they are available. The lowest echelon possessing the organic capability orders the mission flown. Below field army, approved requests that cannot be accomplished by organic means are submitted to the next higher echelon for consideration and inclusion in the plan at that level.

(4) At field army, plans from lower echelons are integrated into the overall field army collection plan. Requests within the field army capability that are approved are assigned to organic units for execution. All other approved requests are considered for conversion to tactical air reconnaissance requests.

b. Immediate Requests. Immediate requirements for visual reconnaissance, aerial photography, or other imagery may be met by either tactical air reconnaissance or Army aerial reconnaissance. Requests are submitted as a tactical air reconnaissance request through the tactical air control party directly to the direct air support center. All intermediate tactical air control parties monitor the request and notify the G2 (S2) air at their level. Any intermediate echelon capable of executing the mission with Army aviation resources cancels the tactical air reconnaissance request and orders the mission flown by Army aircraft.

5-10. Reporting and Dissemination

a. Information of intelligence value that is immediately exploitable is passed through the most expedient means available. Usually, this is accomplished in the form of an in-flight report or a hot photo report (HOT PHOTO REP).

b. The in-flight report is transmitted by the aircraft crew during the conduct of a mission as soon as tactical information of importance is available. If a delay in reporting the information would

render it useless, the report is passed by radio, in the clear, unless prearranged codes have been established.

c. A HOT PHOTO REP is rendered at the earliest possible time after the imagery has been received for interpretation usually within 1 hour. It is a short, concise report of significant information of immediate tactical value.

d. A mission report is submitted at the conclusion of each mission. The report is based on the notes and observations made during the debriefing of the crews as well as interpretation of any imagery. Preparation and dissemination of these re-

ports are accomplished as rapidly as possible after completion of the mission.

e. Summary reports are a consolidation of information on selected enemy activity and submitted to the S2/G2 air according to the schedule that he establishes. These reports are used by the S2/G2 air to analyze the enemy situation and the effectiveness of the aerial reconnaissance and surveillance efforts and to assist in further operations.

f. Detailed information on Army aerial reconnaissance and surveillance reporting and dissemination procedures is contained in FM 30-5 and FM 30-20.

Section III. AIRMOBILITY OPERATIONS

5-11. General

a. Airmobility is the movement of Army personnel and cargo within the battle area by Army aircraft. Airmobility may be provided by specifically organizing units to employ airlift as a means of accomplishing their mission, as in the airmobile division, or by allotting airlift forces to ground combat units. Airmobility operations include airlift of units for combat operations, shifting and relocation of units in the combat zone, aeromedical evacuation, and the air movement of equipment or supplies.

b. Army airlift units are organic to the infantry, airborne, and airmobile divisions, and are organized separately for attachment to corps and field army. Airmobility for armored and infantry (mechanized) divisions is provided from corps and field army resources, when required.

c. Army airlift units may be employed as an organic part of a force, as an attachment, as a unit under operational control, or in the missions of direct support or general support. The preferred method for employment of nonorganic Army airlift is assignment of a direct support or general support mission down to the lowest echelon capable of coordinating the airlift activity. In all cases, aviation unit integrity is maintained intact as nearly as possible.

5-12. Command Relationships

The commander of a supporting Army aviation unit becomes a subordinate commander and an adviser to the supported U.S. Army land force commander. Although the aviator in command of an aircraft is the authority on the technical operation

of that aircraft, the Army commander to whose command the Army aviation is assigned or attached exercises the same command function over the aviator, organization, and equipment as he does over his other Army units.

5-13. Planning Channels for Airmobile Operations

a. Airmobile operations are classified as combat support or combat service support depending on the purpose of the operation and the type of cargo airlifted. Army airlift units may be employed in either type of operation.

b. Combat service support operations are those in which the airlift unit is employed to provide supply, transportation, patient evacuation, or other services to ground combat elements. Combat service support airlift, except aeromedical evacuation, is planned and coordinated through logistic channels. Aeromedical evacuation is planned and coordinated through medical channels.

5-14. Request Procedures for Airmobile Support

a. *General.* Requests for airmobile support may originate at any echelon of command. Requests may be for planned future operations or for immediate airlift to satisfy an unforeseen requirement. Requests are forwarded through the appropriate channel, i.e., operations or logistic, to the command echelon having the authority and possessing the capability to approve the request. Requirements that cannot be met by Army aviation units may be disapproved or converted to requests for Air Force tactical airlift, if appropriate. The originating unit is notified of disapprovals or

conversions to tactical airlift with the reasons therefor.

b. Preplanned Airmobile Operations.

(1) The unit requesting airlift support submits tentative planning data such as airlift mission, estimated aircraft requirements, time required for aircraft, and other information that will assist the approving commander in arriving at a sound decision. The aviation staff officer assists the requesting unit in preparing these tentative planning data.

(2) Close coordination between the operations, logistic, and aviation staff elements is maintained throughout the processing of the request to insure economical employment of airlift resources and adherence to the commander's policies and priorities. When the decision is made to provide the requested support, the approving commander normally will place the required number of aircraft in direct support of the requesting unit for a specified time or for the duration of the mission. Airlift unit integrity is maintained as nearly as possible.

(3) The unit requesting the airlift support is responsible for all planning and coordination incident to the lift except that which relates directly to control and operation of aircraft in flight and combat service support for the airlift unit. The airlift unit plan is based on the plans of the supported unit. The supported unit is provided planning assistance by the airlift unit commander.

c. Requests for Immediate Airmobile Support. Requests for immediate airmobile support are transmitted to the appropriate operations center by the most rapid communications means available. Each echelon reviews and approves the request before passing it to the next higher echelon.

The lowest echelon approving the request and possessing the required airlift capability orders the mission flown. Planning and coordination responsibilities are the same as for preplanned operations and are as thorough as the situation permits.

d. Special Equipment. The supported unit is responsible for obtaining any special air items required such as pallets, tiedown straps, cargo nets, slings, or parachutes. The required equipment is obtained sufficiently in advance to allow loading or rigging prior to the arrival of the aircraft. The airlift unit commander provides advice and assistance on the quantity and the type of special equipment required, allowable loads, and loading and rigging procedure. He insures the return of special equipment left aboard aircraft to the supported unit on completion of the operation.

e. Aeromedical Evacuation.

(1) Aeromedical evacuation in the combat zone (except from airborne operation airheads supported by the Air Force) is a mission of the Army Medical Department. This mission includes battlefield pickup of patients, their transportation to initial treatment facilities within the combat zone, and subsequent moves between treatment facilities within the combat zone.

(2) Aeromedical evacuation operations are conducted under the exclusive control of the responsible medical unit commander. This control includes both aeromedical ambulance units and Army aviation units committed to patient movement missions.

(3) Aircraft designated as medical air ambulances will be used for medical missions only.

(4) Details of aeromedical evacuation are contained in FM 8-10 and FM 8-15.

APPENDIX A

REFERENCES

A-1. Field Manuals (FM)

1-100	Army Aviation Utilization.
3-10	Employment of Chemical and Biological Agents.
8-10	Medical Service, Theater of Operations.
8-15	Medical Service in Divisions, Separate Brigades, and the Armored Cavalry Regiment.
17-36	Divisional Armored and Air Cavalry Units.
30-5	Combat Intelligence.
30-20	Aerial Surveillance — Reconnaissance, Field Army.
31-11	Doctrine for Amphibious Operations.
61-100	The Division.
100-15	Larger Units Theater Army—Corps.
100-27	U.S. Army/U.S. Air Force Doctrine for Tactical Airlift Operations.
101-5	Staff Officers' Field Manual—Staff Organization and Procedure.
101-31-1	Staff Officers' Field Manual—Nuclear Weapons Employment, Doctrine, and Procedures.

A-2. Army Regulations (AR)

310-25	Dictionary of United States Army Terms (Short Title: AD).
310-50	Authorized Abbreviations and Brevity Codes.
525-25	Delineation of Service Responsibilities for Tactical Air Control Parties.

A-3. Miscellaneous

DA Pam 310-series	Military Publications Indexes.
JCS Pub 2	Unified Action Armed Forces (UNAAF).



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GLOSSARY

- Aerial field artillery*—Field artillery weapons mounted on aircraft which serve as the primary means of mobility and from which the weapons can be fired.
- Air alert*—Aircraft airborne in the battle area to answer calls for immediate air support from the ground forces.
- Airborne alert*—A state of aircraft readiness wherein combat-equipped aircraft are airborne and ready for immediate action. It is designed to reduce reaction time and increase the survivability factor.
- Airborne battlefield command and control center*—An Air Force aircraft equipped with communications, data link, and display equipment; it may be employed as an airborne command post or a communications and intelligence relay facility.
- Air controller*—An individual especially trained and assigned to control (by radio, radar, or other means) such aircraft as may be allotted to him for operation within his area.
- Air-ground operations system*—The system of personnel, equipment, procedures, and techniques by which the ground commander requests and receives air support and receives intelligence information obtained through air support means.
- Air interdiction operations*—Air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces, at such a distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required.
- Air items*—Special equipment used in air supply operations provided by the supported unit, such as slings, cargo nets, pallets, doughnuts, tiedown straps, or parachutes.
- Air liaison officer*—A tactical air force or naval aviation officer attached to a ground unit or formation as an adviser.
- Airlift*—To transport personnel or cargo by air. This term includes Air Force tactical airlift (including aeromedical evacuation) and Army air delivery/Army airmobility.
- Air/naval gunfire liaison company*—An organization composed of Marine and Navy personnel specially qualified for shore control of naval gunfire and close air support. Also known as ANGLICO.
- Air (aerial) reconnaissance*—The observation of a specific target from the air by electronic, visual, or other means to obtain specific information. Reconnaissance missions normally do not require repeated or continuous coverage.
- Air reconnaissance liaison officer*—An Army officer specially trained in air reconnaissance and imagery interpretation matters who is attached to a tactical air reconnaissance unit. He assists and advises the air commander and staff on matters concerning ground operations and informs the supported ground commander on the status of air reconnaissance requests.
- Air Force air request net*—A communications net provided by the Air Force component to enable land forces to request immediate air support.

- Airspace control element (AEC)*—An element of the TOC which coordinates the use of airspace over the command area and serves as a source of information for current status of air defense and Army aviation capabilities.
- Air superiority*—The degree of dominance in the air battle of one force over another which permits the conduct of operations by the former and its related land, sea, and air forces at a given time and place without prohibitive interference by the opposing aerial force.
- Air support operations*—All forms of air action employed in the battle area that assist ground tactical operations. This term includes tactical air support operations and Army air support operations.
- Air support radar team*—A subordinate operational component of a tactical air control system that provides ground controlled precision flightpath guidance and weapon release.
- Air (aerial) surveillance*—The systematic observation of large areas of terrain from the air by electronic, visual, or other means to identify and determine the movements of aircraft, missiles, and enemy forces, in the terrain under observation.
- Allocation (air)*—The designation of specific numbers and types of tactical air support aircraft sorties for use during a specified period, a specified mission, a specified phase of an operation, or for carrying out an assigned task.
- Antiair operations*—The U.S. Navy and Marine Corps term used to describe that action required against hostile aircraft and/or missiles and their supporting forces and operating bases to destroy or reduce to an acceptable level the enemy air and missile threat. These operations encompass all measures, both active and passive, to include offensive air operations and air defense operations.
- Apportionment (air)*—The joint force commander's decision on the division of the total tactical air capability, expressed as a percentage of the available tactical air effort, among the air combat missions to be performed for a specified period.
- Area Search*—Search within a specified area or boundary.
- Area target*—A target consisting of an area rather than a single point.
- Armed helicopter*—Any helicopter that has a mounted weapon system intended primarily for offensive use.
- Armed reconnaissance*—An offensive mission conducted to search for and attack targets of opportunity in a designated area or along designated routes.
- Armed reconnaissance (air)*—An air mission flown with the primary purpose of locating and attacking targets of opportunity, i.e., enemy materiel, personnel, and facilities in assigned general areas or along assigned ground communications routes and not for the purpose of attacking specific briefed targets.
- Army aerial fighting units*—An organization of the combat arms with the primary mission of engaging an enemy in combat and which employs aircraft specifically designed as weapons platforms as the primary means of mobility and delivery of fire.
- Army air-ground system*—The system that provides the Army commander with the organization, equipment, and techniques to plan, direct, and control Army air support operations and to plan, evaluate, process, and coordinate tactical air support requirements and operations. This system does not include control of Air Force agencies unless attached to the Army force.

- Army airmobility (airlift)*—The movement of Army personnel and cargo about the battle area in army aircraft.
- Army aerial reconnaissance and surveillance*—Reconnaissance missions executed in the battle area by Army aircraft to obtain, by visual observation or other detection means, information about the activities and resources of enemy forces, the weather, or terrain to support immediate tactical operations.
- Army air support operations*—Air operations executed by Army aviation units to support Army tactical operations.
- Army aviation unit*—An assault, assault support, or other aviation organization which supports the arms and Services.
- Army block of airspace*—That airspace above the battle area in which the Army component commander is responsible for control of air traffic. The Army block of airspace boundaries extend across the width of each field army area, from the field army rear boundary to the air traffic control line, and up to the coordination altitude.
- Attack helicopter*—An armed helicopter modified or designed to search out and engage enemy targets or to extend or supplement the fires of ground-based weapons.
- Close air support*—Air attacks against hostile targets which are in close proximity of friendly forces and which require detailed integration of each air mission with the fire and movement of those forces. Close air support missions are flown by tactical air force aircraft under the command and control of the air component commander.
- Combat area*—A restricted air, land, or sea area, which is established to prevent or minimize mutual interference between friendly forces engaged in combat operations.
- Combat zone*—That area required by combat forces for the conduct of operations. The territory forward of the army rear area boundary.
- Column cover*—Cover of a ground column by aircraft in radio contact therewith, providing for its protection by reconnaissance or attack or both of air or ground targets that threaten the column.
- Combined force*—A military force composed of two or more allied nations operating under a single commander authorized to exercise operational command over such combined forces.
- Component commander*—The commander of a force that includes all the resources of any one Service assigned to a larger force, i.e., the Army component of a joint task force.
- Control and reporting center*—A subordinate air control element of the Air Force tactical air control center from which radar control and warning operations are conducted within its area of responsibility.
- Control and reporting post*—An Air Force tactical air control system facility subordinate to the control and reporting center that provides radar control and surveillance within its area of responsibility.
- Controlled airspace*—Airspace of defined dimensions within which air traffic control is exercised.
- Controlled firing area*—An area in which ordnance firing is conducted under controlled conditions to eliminate hazard to aircraft.
- Coordination altitude*—The altitude agreed to by the component commanders and approved by the theater commander that delineates the upper limit of the Army block of airspace in the combat zone; normally the altitude below which the preponderance of airspace usage is Army.

Counterair operations—The U.S. Air Force term used to describe those air operations conducted to gain and maintain the desired degree of control of the air by the destruction or neutralization of enemy forces and their operating bases. These operations encompass all measures, both active and passive, to include offensive air operations and air defense operations.

Deck alert—A state of readiness wherein carrier-based aircraft are maintained armed and on deck ready for takeoff in a specified number of minutes.

Direct air support center—A subordinate operational component of a tactical air control system designed to control and direct close air support and other tactical air support operations and normally collocated with the command post of the supported ground unit.

Direct air support center (airborne)—An airborne aircraft equipped with the necessary personnel, communications, and operations facilities to function as a direct air support center.

Direct aerial fire support—Fires delivered by aerial vehicles organic to land forces against surface targets and in support of land operations. Such fire support supplements, is integrated with, and is controlled similarly to Army surface weaponry.

Fire coordination area—An area with specified restraints into which fires in excess to these restraints will not be delivered without approval of the establishing authority.

Fire coordination line—A line established to coordinate fires between airborne or airborne forces and linkup forces or between other converging friendly forces. See *Fire support coordination line*.

Fire support element—A single location within the tactical operations center in which are centrally located all communications facilities and personnel incident to the coordination of all forms of fire support.

Fire support coordination line—A line established forward of friendly positions by the senior land force commander and coordinated with supporting forces, forward of which supporting forces may attack targets or deliver fires without danger or reference to the land forces. Behind this line, targets may be attacked or fires delivered only after coordination with the appropriate land force commander. If possible, the fire support coordination line should follow some well-defined geographic feature. See *Fire coordination line*.

Flight operations center—The element of the Army air traffic regulation system that provides aircraft flight following, separation of aircraft under instrument conditions, and identification of friendly aircraft to friendly air defense agencies.

Forward air controller—An officer (aviator/pilot) member of the tactical air control party who, from a forward ground or airborne position, controls aircraft engaged in close air support of ground troops.

Forward air control post—A highly mobile Air Force tactical air control system radar facility subordinate to the control and reporting center/post used to extend radar coverage and control in the forward combat area.

Forward observer—An observer operating with frontline troops and trained to adjust ground or naval gunfire and pass back battlefield information. In the absence of a forward air controller, he may control close air support strikes.

- Ground alert**—That status in which aircraft on the ground are fully serviced and armed, with combat crews in readiness to take off within a specified short period of time (usually 15 minutes) after receipt of a mission order.
- Ground liaison officer**—An officer trained in offensive air support activities. Ground liaison officers are normally organized into parties under the control of the appropriate Army commander to provide liaison to Air Force and Navy aviation units engaged in training and combat operations.
- Ground liaison officer net**—A communications net that provides direct communications between the ground liaison officers and their organizations for briefing, debriefing, and exchange of other information. This net is provided from Army resources. See *Ground liaison officer*.
- Immediate air request**—A request for air support on a target or in support of an operation that cannot be identified or anticipated sufficiently in advance to permit detailed mission coordination and planning.
- Immediate air support**—Air support to meet specific requests that arise during the course of a battle and that, by their nature, cannot be planned in advance.
- In-flight report**—A report from a pilot or aircrew member, made while en route or over the target, on information obtained both at the target and en route.
- In-flight reporting net**—A communications net over which pilots transmit target assessment, damage, and other intelligence information to ground units while airborne over the target or en route.
- Interdiction**—To isolate, seal off, hinder, or deny by any means enemy use of an area, route, or approach. Interdiction operations are normally conducted forward of the fire support coordination line. When conducted behind the fire support coordination line, they are handled as close air support missions.
- Joint commander**—A commander authorized to exercise unified or operational command of a force composed of significant elements of two or more Services.
- Joint force**—A general term applied to a force composed of significant elements of two or more Services, operating under a single commander authorized to exercise unified command or operational control over such joint force.
- Mission**—1. The objective; the task, together with the purpose, that clearly indicates the action to be taken and the reason therefor.
2. In common usage, especially when applied to lower military units, a duty assigned to an individual or unit; a task.
3. The dispatching of one or more aircraft to accomplish a particular task.
- Point target**—A target that requires the accurate placement of bombs or fire.
- Precedence**—A numerical listing of air requests having the same priority in order of relative importance to the tactical situation of the requester. A precedence establishes a priority within a priority.
- Preplanned air request**—A request for air support on a target or in support of an operation that can be identified or anticipated sufficiently in advance to permit detailed mission coordination and planning.
- Preplanned air support**—Air support in accordance with a program planned in advance of operations.

Priority—An indication of the relative importance, rather than the exclusive and final designation of the order of accomplishment, of air requests.

Reporting post—An element of the control and reporting system used to extend the radar coverage of the control and reporting center. It does not undertake the control of aircraft.

Side-looking aerial radar—An aerial radar, viewing at right angles to the axis of the vehicle, that produces a presentation of terrain or moving targets. Commonly referred to as SLAR.

Sortie—An aircraft airborne on a mission against the enemy or in direct support of such a mission. One operational flight by a single aircraft.

Specific search—Reconnaissance of a point target for specific information.

Strategic air operations—Those air operations and supporting operations designed to effect, through the systematic application of force to selected series of vital targets, the progressive destruction and disintegration of an enemy's warmaking capacity to the point that he no longer retains the ability or will to wage war. Vital targets are industrial systems, sources of raw or critical material, lines of communications, key agricultural areas, uncommitted elements of enemy armed forces, and other such target systems. The effects of strategic air operations are usually not readily apparent and normally do not directly assist tactical operations although they may make a substantial contribution to tactical air operations, e.g., counter-air operations.

Supporting arms coordination center—A single location on board an amphibious command ship in which all communications facilities incident to the coordination of fire support of the artillery, air, and naval gunfire are centralized. This is the naval counterpart to the fire support coordination center used by the landing force. See also *Fire support coordination center*.

Tactical air command center—The principal Marine Corps air operation installation from which aircraft and air warning functions of tactical air operations are directed. It is the senior agency of the Marine Corps air command and control system from which the Marine Corps tactical air commander can direct and control tactical air operations and coordinate such air operations with other Services.

Tactical air commander (ashore)—The officer (aviator/pilot) responsible to the landing force commander for control and coordination of air operations within the landing force commander's area of responsibility when control of these landing operations is passed ashore.

Tactical air control center—The principal Air Force air operations installation from which all aircraft and air warning functions of tactical air operations are controlled.

Tactical air control group—1. (Land-based): A flexible administrative and tactical component of a tactical air organization that provides aircraft control and warning functions ashore for offensive and defensive missions within the tactical air command area of responsibility.

2. (Ship-based): An administrative and tactical component of an amphibious force that provides aircraft control and warning facilities afloat for offensive and defensive missions within the tactical air command area of responsibility.

Tactical air control party—A subordinate operational component of a tactical air control system designed to provide air liaison to land forces and control of aircraft.

Tactical air control system—The system that provides the air component commander with the organization, procedures, and equipment necessary to plan, direct, and control tactical air support operations and to coordinate air operations with other components and with ground tactical operations. It is composed of control agencies and communications-electronics facilities which provide the means for centralized control and decentralized execution of missions.

Tactical air direction center—An air operations installation under the overall control of the tactical air control center/tactical air command center from which aircraft and air warning service functions of tactical air operations in an area of responsibility are directed.

Tactical air direction nets—The tactical air direction nets are used by the air liaison officer/forward air controller in final control and assistance to pilots on air support missions. They are provided and operated by the Air Force.

Tactical air force—A numbered air force charged with carrying out tactical air operations in coordination with ground or naval forces.

Tactical air officer (afloat)—The officer (aviator/pilot) under the amphibious task force commander who coordinates planning of all phases of air participation of the amphibious operation and air operations of supporting forces en route to and in the amphibious objective area.

Tactical airlift—The air movement of personnel and cargo by airlift forces available to the theater commander to support combat operations.

Tactical air operations—Air operations and supporting operations carried out in the battle area by tactical air forces in coordination with surface forces to—

- a. Gain and maintain air superiority in the battle area.
- b. Prevent movement of enemy forces into and within the battle area and to seek out and destroy those forces and their supporting installations.
- c. Join with surface forces in operations within the battle area in order to directly assist in attainment of the immediate tactical objective.

Tactical air reconnaissance—Missions undertaken by tactical air forces to obtain with the use of air vehicles equipped with visual, optical, electronic, or other sensory devices; specific information about the activities and resources of an enemy or potential enemy; or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area.

Tactical air support—Air support operations executed by tactical air forces in coordination with surface forces that directly assist the land or naval battle.

Tactical air support element—An element of the division, corps, or field army tactical operations center consisting of G2 air and G3 air personnel who coordinate and integrate tactical air support with current tactical ground operations.

Tactical area of responsibility—A defined area of land for which responsibility is specifically assigned to the commander of the area as a measure for control of assigned forces and coordination of support.

Tactical operations center—A physical groupment of those elements of an Army general and special staff concerned with current tactical operations and the tactical support thereof.

Target of opportunity—A target visible to a surface or air sensor or observer that is within range of available weapons and against which fire has not been scheduled or requested.

Time on target (air)—1. Time at which aircraft are scheduled to attack or photograph a target.

2. Actual time attack or photography takes place.

By Order of the Secretary of the Army:

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

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